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Center for
Human Resource
Research

The Ohio State University

PATHWAYS TO THE FUTURE

A LONGITUDINAL STUDY OF YOUNG AMERICANS

Preliminary Report on the 1981 Survey

November 1982

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CHAPTER 1

INTRODUCTION

by Michael E. Borus

Between January and May 1981 the third round of data was collected for the National Longitudinal Survey of Youth Labor Market Experience (NLS). The 11,340 respondents[1] represent the 32,650,000 civilian youth born during the period 1957 through 1964 (who were 16 to 24 years of age at the time of the survey). The sample included overrepresentation of Hispanics, non-Hispanic blacks, and poor non-Hispanic, nonblack youth.[2] Earlier volumes describe the sample in greater detail.[3]

I. CHARACTERISTICS OF THE CIVILIAN YOUTH POPULATION

Tables 1.1 - 1.4 present selected characteristics of this civilian youth population in 1981. As expected, there was relatively little change from the characteristics exhibited in the previous two surveys: the population was evenly divided among males and females; 14 percent were black, 6 percent Hispanic and 80 percent white; 6 percent had a health limitation; and as in the previous year, 20 percent resided in the Northeast, 30 percent in the North Central states, 33 percent in the South and 16 percent in the West.

With the aging of the sample, educational attainment and enrollment

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[1] The response rate was 96.1 percent of the youth originally interviewed in 1979.

[2] We refer to all non-Hispanic, nonblack youth as "white" since only about two percent are of Asian, Pacific Island, or Native American descent.

[3] See Borus (1981) Chapter 1.

Table 1.1 Selected Characteristics, by Race (in Thousands)

Characteristic	Black		Hispanic		White		Total	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Sex								
Female	2,294	52	1,039	50	13,084	50	16,418	50
Male	2,133	48	1,023	50	13,083	50	16,239	50
Age								
16-17	1,072	24	505	24	5,880	22	7,458	23
18-19	1,082	24	511	25	6,426	24	8,019	24
20-21	1,112	25	494	24	6,505	25	8,111	25
22-24	1,162	26	551	27	7,360	28	9,073	28
Region								
Northeast	810	18	404	20	5,440	21	6,654	20
North Central	843	19	165	8	8,818	34	9,831	30
South	2,499	56	580	28	7,694	29	10,776	33
West	275	6	913	44	4,222	16	5,403	16
Enrollment status								
High school dropout	850	19	601	29	3,123	12	4,574	14
High school student	1,237	28	524	25	6,220	24	7,981	24
College student	730	16	298	14	5,603	21	6,632	20
Nonenrolled high school graduate	1,610	36	639	31	11,228	43	13,477	41
Educational attainment								
0-8	157	4	240	12	702	3	1,100	3
9-11	1,929	44	885	43	8,638	33	11,452	35
12	1,492	34	588	28	10,129	39	12,210	37
13 or more	849	19	349	17	6,703	26	7,901	24
With a health limitation	273	6	150	7	1,358	5	1,781	6
Participated in government sponsored employment and training program								
Ever	1,978	45	620	30	3,422	13	6,020	18
During 1980	716	16	200	10	1,086	4	2,002	6
Marital and family status								
Never married	3,900	88	1,527	74	20,309	78	25,736	79
Married	379	9	437	21	5,142	20	5,958	18
Separated, widowed, divorced	149	3	97	5	718	3	964	3

Table 1.1 (continued)

Characteristic	Black		Hispanic		White		Total	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Has children	971	22	406	20	3,085	12	4,462	14
Family income								
Less than $5,000	624	14	188	9	1,916	7	2,729	8
5,000-9,999	821	18	326	16	2,505	10	3,652	11
10,000-14,999	546	12	281	14	2,864	11	3,691	11
15,000-19,999	407	9	192	9	2,720	10	3,319	10
20,000-24,999	274	6	182	9	2,538	10	2,995	9
25,000-29,999	179	4	121	6	2,002	8	2,302	7
30,000-39,999	262	6	142	7	3,130	12	3,534	11
40,000 or more	187	4	120	6	3,842	15	4,150	13
Not available	1,128	26	509	25	4,662	18	6,299	19
Poverty status								
Poor	1,655	37	532	26	2,795	11	4,982	15
Nonpoor	2,539	57	1,417	69	22,467	86	26,423	81
Not available	234	5	113	6	905	4	1,252	4
Employment status								
Employed	2,003	45	1,128	55	16,502	63	19,627	60
Unemployed	954	22	314	15	2,893	11	4,165	13
Out of labor force	1,470	33	620	30	6,773	26	8,865	27
Total	4,427	14	2,062	6	26,167	80	32,657	100

UNIVERSE: Civilians age 16-23 on January 1, 1981. (N=32,657,000)

Table 1.2 Selected Characteristics, by Sex (in Thousands)

Characteristic	Female		Male		Total	
	Number	Percent	Number	Percent	Number	Percent
Age						
16-17	3,633	22	3,825	24	7,458	23
18-19	4,100	25	3,919	24	8,019	24
20-21	4,126	25	3,984	24	8,110	25
22-24	4,564	28	4,510	28	9,075	28
Region						
Northeast	3,331	20	3,323	20	6,654	20
North Central	4,766	29	5,068	31	9,834	30
South	5,632	34	5,146	32	10,778	33
West	2,695	16	2,708	17	5,403	16
Enrollment status						
High school dropout	2,106	13	2,467	15	4,574	14
High school student	3,785	23	4,196	26	7,981	24
College student	3,197	20	3,435	21	6,632	20
Nonenrolled high school graduate	7,334	45	6,147	38	13,480	41
Educational attainment						
0-8	479	3	620	4	1,100	3
9-11	5,412	33	6,043	37	11,455	35
12	6,321	38	5,893	36	12,214	37
13 or more	4,212	26	3,689	23	7,901	24
With a health limitation	1,156	7	625	4	1,781	6
Participated in government sponsored employment and training program						
Ever	2,927	18	3,094	19	6,020	18
During 1980	937	6	1,065	7	2,002	6
Marital and family status						
Never married	11,794	72	13,935	86	25,729	79
Married	3,922	24	2,036	12	5,958	18
Separated, widowed, divorced	700	4	264	2	964	3
Has children	3,423	21	1,040	6	4,462	14

Table 1.2 (continued)

Characteristic	Female		Male		Total	
	Number	Percent	Number	Percent	Number	Percent
Family income						
Less than $5,000	1,608	10	1,120	7	2,729	8
5,000-9,999	1,959	12	1,693	10	3,652	11
10,000-14,999	1,846	11	1,844	11	3,691	11
15,000-19,999	1,696	10	1,623	10	3,319	10
20,000-24,999	1,477	9	1,518	9	2,995	9
25,000-29,999	1,134	7	1,167	7	2,302	7
30,000-39,999	1,760	11	1,774	11	3,534	11
40,000 or more	1,835	11	2,315	14	4,150	13
Not available	3,109	19	3,190	20	6,299	19
Poverty status						
Poor	2,684	16	2,297	14	4,982	15
Nonpoor	13,024	79	13,396	82	26,419	81
Not available	708	4	544	3	1,252	4
Employment status						
Employed	9,367	57	10,259	63	19,626	60
Unemployed	1,783	11	2,382	15	4,165	13
Out of labor force	5,277	32	3,589	22	8,865	27
Total	16,418	50	16,239	50	32,657	50

UNIVERSE: Civilians age 16-23 on January 1, 1981. (N=32,657,000)

Table 1.3 Selected Characteristics, by Age (in Thousands)

Characteristic	16-17		18-19		20-21		22-24		Total	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percen
Region										
Northeast	1,515	20	1,616	20	1,609	20	1,914	21	6,654	20
North Central	2,275	30	2,377	30	2,538	31	2,644	29	9,834	30
South	2,480	33	2,750	34	2,591	32	2,957	33	10,778	33
West	1,189	16	1,278	16	1,374	17	1,562	17	5,403	16
Enrollment status										
High school dropout	748	10	1,323	16	1,333	16	1,170	13	4,574	14
High school student	6,575	88	1,330	17	47	1	19	*	7,981	24
College student	38	*	2,544	32	2,383	29	1,666	18	6,632	20
Nonenrolled high school graduate	96	1	2,823	35	4,348	54	6,219	68	13,482	41
Educational attainment										
0-8	358	5	246	3	210	3	286	3	1,100	3
9-11	6,969	93	2,408	30	1,170	14	903	10	11,454	35
12	128	2	4,400	55	3,722	46	3,965	44	12,214	37
13 or more	6	*	967	12	3,009	37	3,922	43	7,892	24
With a health limitation	388	5	410	5	474	6	510	6	1,781	6
Participated in government sponsored employment and training program										
Ever	974	13	1,450	18	1,707	21	1,890	21	6,020	18
During 1980	542	7	657	8	462	6	340	4	2,002	6
Marital and family status										
Never married	7,266	97	7,154	89	6,024	74	5,295	58	25,745	79
Married	178	2	770	10	1,790	22	3,220	36	5,958	18
Separated, widowed, divorced	12	*	95	1	297	4	560	6	964	3
Has children	203	3	629	8	1,340	16	2,287	25	4,460	14

Table 1.3 (continued)

Characteristic	16-17		18-19		20-21		22-24		Total	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Family income										
Less than $5000	407	6	724	9	808	10	790	9	2,729	8
5,000-9,999	616	8	763	10	999	12	1,273	14	3,652	11
10,000-14,999	702	9	616	8	979	12	1,394	15	3,691	11
15,000-19,999	704	9	651	8	760	9	1,202	13	3,319	10
20,000-24,999	753	10	618	8	692	8	932	10	2,995	9
25,000-29,999	706	10	595	7	484	6	517	6	2,302	7
30,000-39,999	1,056	14	974	12	828	10	677	8	3,534	11
40,000 or more	959	13	1,206	15	1,096	14	889	10	4,150	13
Not available	1,555	21	1,873	23	1,464	18	1,402	15	6,299	19
Poverty status										
Poor	1,174	16	1,397	17	1,204	15	1,208	13	4,982	15
Nonpoor	6,062	81	6,277	78	6,551	81	7,536	83	26,433	81
Not available	221	3	346	4	356	4	329	4	1,252	4
Employment status										
Employed	3,218	43	4,662	58	5,288	65	6,457	72	19,630	60
Unemployed	1,379	18	1,143	14	847	10	794	9	4,163	13
Out of labor force	2,929	39	2,200	28	1,989	24	1,744	19	8,863	27
Total	7,458	23	8,019	24	8,111	25	9,073	28	32,657	100

*Percentage is less than 0.5.

UNIVERSE: Civilians age 16-23 on January 1, 1981. (N=32,657,000)

Table 1.4 Selected Characteristics, by Poverty Status (in Thousands)

Characteristic	Poor		Nonpoor		Not available		Total	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Region								
Northeast	907	18	5,540	21	205	16	6,654	20
North Central	1,196	24	8,311	31	323	26	9,832	30
South	2,075	42	8,234	31	468	37	10,775	33
West	804	16	4,343	16	256	20	5,403	17
Enrollment status								
High school dropout	1,472	30	2,748	10	353	28	4,574	14
High school student	1,169	24	6,615	25	196	16	7,981	24
College student	859	17	5,597	21	176	14	6,632	20
Nonenrolled high school graduate	1,482	30	11,468	43	526	42	13,475	41
Educational attainment								
0-8	407	8	621	2	72	6	1,100	3
9-11	2,235	45	8,739	33	477	38	11,451	35
12	1,381	28	10,341	39	487	39	12,208	37
13 or more	960	19	6,725	25	216	17	7,901	24
With a health limitation	422	8	1,266	5	93	7	1,781	6
Participated in government sponsored employment and training program								
Ever	1,650	33	4,033	15	337	27	6,020	18
During 1980	687	14	1,211	5	104	8	2,002	6
Marital and family status								
Never married	4,180	84	20,747	78	806	64	25,732	79
Married	519	10	5,064	19	375	30	5,958	18
Separated, widowed, divorced	283	6	610	2	71	6	964	3
Has children	1,106	22	3,048	12	306	24	4,460	14
Family income								
Less than $5,000	2,546	51	145	*	39	3	2,729	8
5,000-9,999	1,320	26	2,326	9	7	*	3,652	11
10,000-14,999	208	4	3,481	13	1	*	3,691	11
15,000-19,999	31	1	3,287	12	1	*	3,319	10
20,000-24,999	0	0	2,995	11	0	0	2,995	9
25,000-29,999	0	0	2,302	9	0	0	2,302	7
30,000-39,999	0	0	3,534	13	0	0	3,534	11
40,000 or more	0	0	4,150	16	0	0	4,150	13
Not available	877	18	4,217	16	1,204	96	6,299	19

Table 1.4 (continued)

Characteristic	Poor		Nonpoor		Not available		Total	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Employment status								
Employed	2,055	41	16,917	64	655	53	19,626	60
Unemployed	982	20	2,968	11	215	18	4,165	13
Out of labor force	1,941	39	6,566	25	359	29	8,866	27
Total	4,982	15	26,423	81	1,252	4	32,657	100

*Percentage is less than 0.5.

UNIVERSE: Civilians age 16-23 on January 1, 1981. (N=32,657,000)

status changed. By 1981, 61 percent of the youth had completed at least 12 years of education; 20 percent were college students and 41 percent were nonenrolled high school graduates. The number of high school dropouts increased to 14 percent. Likewise, the proportion who had ever participated in a government sponsored employment and training program increased to 18 percent of all youth in 1981, although the proportion who participated in 1980 was the same as the proportion participating in 1978 -- 6 percent.

The proportion who had been married increased to 21 percent from 15 percent in the year before and 11 percent in 1979. The number who had children also increased from 8 percent in 1979 to 10 percent in 1980 and 14 percent in 1981. Slightly more of the youth were in poverty in 1981 than was true in 1980. In the latter year, 14 percent of those reporting family income were below the poverty line while in 1981, 16 percent reported below poverty incomes. There was at the same time a slight increase of youth living in families with incomes of $30,000 or more. Finally, the proportions of the population age 16 and over who were employed, unemployed and out of the labor force were identical in 1981 (60 percent, 13 percent and 27 percent, respectively).

The characteristics by race were similar to previous years. Blacks were highly concentrated in the South and Hispanics in the West. The proportion of dropouts from high school was much higher for Hispanics, nearly 30 percent. Participation in government sponsored training programs was particularly high for blacks: 45 percent had participated in such programs. Fewer blacks (12 percent) than Hispanics (21 percent) or whites (26 percent) had been married, but more blacks and Hispanics had children. Finally, the incidence of poverty and unemployment was much higher for minorities: 39 percent of black and 28 percent of Hispanics were in poverty as compared to 11 percent of whites. About one third of blacks, one fifth of Hispanics and one seventh of whites were unemployed.

Women included a larger proportion who were high school graduates (65 percent as opposed to 59 percent for males), who had a health limitation (7 percent versus 4 percent), who had been married (28 percent compared to 14 percent), who had children (21 percent versus 6 percent), who were in poverty (16.8 percent as opposed to 14.6 percent), and who were out of the labor force (32 percent compared to 22 percent).

By the time they reach age 22, most youth have completed high school if they are going to do so. In 1981, 13 percent of the 22-24 year olds were high school dropouts. By this age, 46 percent had been married and 25 percent had had children. More of this age group than younger youth were employed; only 19 percent were out of the labor force and the unemployment rate of 11 percent was considerably below the nearly 30 percent rate among those who were 16-17 years of age. Poverty was also somewhat lower at 13.5 percent than was true of the 17 percent rate for the 16-17 year olds.

As in the past, poverty was more concentrated in the South than in other regions of the country. In addition, the proportion of the poor living in the Northeast declined from 21 percent in 1979 to 20 percent in 1980 and 18 percent in 1981. As in previous years, youth whose family incomes were below the poverty line were less likely to have been married and more likely to have children than was true of the nonpoor. As the population aged there was also an increase in the proportion of the poor who had ever participated in a government sponsored training program, from 26 percent in 1979 to 30 percent in 1980 and 33 percent in 1981. Finally, the unemployment rate among the poor at 33 percent was more than twice as high as the 15 percent unemployment rate among the nonpoor.

II. ORGANIZATION OF THIS REPORT

This preliminary report contains four further chapters. These chapters are descriptive in nature and rely primarily on simple cross-tabular presentation. Chapter 2 discusses the employment status of the youth population 16-21 at the time of the interview. Information is presented on labor force participation and unemployment rates for various segments of the population. Chapter 3 studies early occupational mobility of youth, from their first job after leaving school until 1981. Chapter 4 discusses participation in government sponsored employment and training programs during calendar year 1980. The final chapter presents information on how youth spend their time.

References

Michael E. Borus, ed. Pathways to the Future: A Report on the National Longitudinal Survey of Youth Labor Market Experience in 1979, Columbus, Ohio: The Ohio State University Center for Human Resource Research, May 1981.

CHAPTER 2

EMPLOYMENT STATUS OF YOUTH, 1981

by Richard Santos

I. INTRODUCTION

After a short-lived recovery from the 1980 recession in the initial part of 1981, unemployment continued to characterize the labor market.[1] Since nearly all of the 1981 NLS interviews are conducted in the spring, the employment status of youth was obtained before the economic downturn.[2] Table 2.1 presents the Current Population Survey (CPS) employment status of youth age 16-21 for the first five months in 1979, 1980 and 1981. The labor force participation rate (LFPR) remained basically unchanged in the three years, except for a slight decline in the first months of each. According to the CPS, unemployment, however, crept slowly upward between 1979 and 1980, but jumped dramatically in 1981. The national unemployment rate for youth age 16-21 peaked in February 1981. As one would expect from increasing joblessness, the employment/population ratio also dipped for youth in 1981.

This chapter examines the employment status of youth in 1981, presenting the LFPR, unemployment rates, and employment/population ratios for youth age 16-21 by race and sex. Primary emphasis will be on employment status changes from previous NLS surveys. In addition, the employment status of NLS youth age 22-24 will be examined separately. The last section presents the effects

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[1] Employment conditions in 1981 are drawn from Robert W. Bednarzik, et al., "The Employment Situation in 1981," Monthly Labor Review (U.S. Department of Labor: Washington, D.C., March 1982).

[2] Less than 2 percent of the 1981 NLS interviews of youth age 16-21 were conducted after May. These summer interviews were excluded from the analysis to control for the entrance of students into the labor force and these youth are assumed to be distributed proportionately to those interviewed in the spring.

Table 2.1 Employment Status of Civilian Youth Age 16-21 by Selected Month, 1979-1981, Current Population Survey

	Labor force participation rate			Percent unemployed			Employment/ population ratio		
	1979	1980	1981	1979	1980	1981	1979	1980	1981
Jan.	60.1	59.5	58.7	15.0	15.7	18.0	51.1	50.2	48.2
Feb.	59.3	58.4	58.1	15.0	15.6	18.5	50.4	49.3	47.4
March	59.9	58.9	58.4	14.1	14.9	17.7	51.5	50.1	48.0
April	59.8	58.4	59.3	13.0	14.0	16.1	52.2	50.2	49.7
May	60.4	61.0	60.5	13.0	16.5	16.9	52.5	50.9	50.3

Source: U.S. Department of Labor, Employment and Earnings.

of health-related work restrictions and obesity on employment status.

II. EMPLOYMENT STATUS OF YOUTH

Status by Sex and Race

Table 2.2 presents the employment status of youth age 16-21 in each of the NLS spring surveys 1979 through 1981 by sex and race.[3] Overall, 70 percent of the youth participated in the labor force in 1981 and the LFPR was slightly lower than in previous surveys. For whites, LFPR remained constant; it increased for Hispanic males, and dropped slightly among blacks.

Unemployment in the 1981 survey was estimated at 20 percent, an increase from the previous surveys. The increase was concentrated among males, particularly white young men. As in previous surveys, the incidence of unemployment was compounded for minority youth and females. The unemployment rate was highest for blacks, 39 percent for females and 35 percent for males. The white rate in 1981 was one-half of that of blacks, and, as in previous years, the rate for Hispanic youth was lower than that of blacks but higher than whites. White males were the only group that showed a steady increase from the initial 1979 survey. Among blacks, unemployment declined in 1980 but increased in 1981 to its 1979 rate. Among Hispanics, the unemployment rates in 1980 and 1981 were similar, but they showed an increase for males and a decline for females from the 1979 rate.

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[3] The sixteen year olds in 1981 have a slightly higher mean age than in the two earlier years. This was due to the NLS sample selection which included persons born between 1957 and 1964. Individuals born in 1965 who would have become 16 by the time of the interviews in 1981 are not included in the NLS statistics. The inclusion of these persons would lower labor force participation rates and employment to population ratios while increasing unemployment rates. The effects are assumed to be small, however.

Table 2.2 NLS Employment Status by Sex and Race, 1979-1981 Surveys

Sex	Labor force participation rate			Percent unemployed			Employment/ population ratio		
	1979	1980	1981	1979	1980	1981	1979	1980	1981
	Black								
Female	60.2	57.7	56.9	41.2	38.1	38.5	35.4	35.7	35.0
Male	70.9	68.5	68.9	35.9	32.0	34.9	45.4	46.5	44.9
Total	65.3	62.9	62.8	38.5	34.9	36.6	40.2	41.0	39.8
	Hispanic								
Female	53.4	56.9	59.2	24.7	21.5	21.0	40.2	44.7	46.8
Male	70.7	75.8	77.3	22.0	27.0	26.4	55.1	55.3	56.9
Total	61.8	66.5	68.4	23.2	24.7	24.1	47.1	50.1	51.9
	White								
Female	69.9	69.4	67.6	17.5	16.0	16.0	57.7	58.3	56.8
Male	74.9	76.0	75.0	14.4	16.3	19.0	64.1	63.6	60.7
Total	72.4	72.7	71.2	15.9	16.1	17.6	60.9	61.0	58.7
	Total								
Female	67.6	67.0	65.6	20.7	18.9	19.1	53.6	54.8	53.1
Male	74.1	75.0	74.3	17.5	18.9	21.5	61.1	60.8	58.3
Total	70.8	70.8	69.9	19.1	18.9	20.4	57.3	57.5	55.7

UNIVERSE: Civilians born in 1957-64 age 16-21 on interview date (N=24,580,000) in 1979 and (N=24,700,000) in 1980 and (N=23,580,000) in 1981.

The employment/population ratios generally showed only a slight decline across surveys for all groups. The one noticeable exception was among Hispanic females, whose employment ratio increased by seven points since 1979.

Status by Age

The youngest age group has the most unfavorable employment status (Table 2.3). The consistency in employment status across survey periods is striking. Blacks age 16-17 continued to have the highest incidence of unemployment, 60 percent for females and 46 percent for males. Unemployment declines with age for all youth groups, but older minority youth continue to incur high unemployment.

Status of Older Youth Age 22-24

In the 1981 NLS survey, the employment status of 22-24 year olds became available (Table 2.4). As expected, their status is better than that of younger youth: most males are in the labor force and there are small differences by race. But black and Hispanic males continue to have high unemployment rates at age 22-24 and their rates are substantially higher than whites. Black males have an unemployment rate twice that of whites, 22 percent versus 11 percent. As expected, the employment/population ratios of minority males also are lower.

The LFPR of females trailed that of males, with Hispanic females having the lowest LFPR and whites the highest. White females had the lowest unemployment rate of the youth groups, 6 percent, but Hispanic females had over twice the rate of whites and black females had the highest rate of unemployment, 23 percent. The employment/population ratio of minority women was less than 80 percent that of whites.

Table 2.3 Employment Status, by Sex, Race and Age, 1979-1981 Surveys

Sex	Labor force participation rate			Percent unemployed			Employment/ population ratio		
	1979	1980	1981	1979	1980	1981	1979	1980	1981
	Black								
Female									
16-17	48.2	43.6	40.7	54.6	52.9	59.7	21.9	20.5	16.4
18-19	64.0	64.9	62.9	40.6	36.1	36.2	38.0	41.5	48.1
20-21	68.0	65.1	65.7	32.6	30.0	28.8	45.8	45.6	46.8
Male									
16-17	59.6	52.8	55.1	53.5	47.1	45.9	27.7	27.9	29.8
18-19	72.7	72.5	71.4	33.4	29.2	37.1	48.4	51.3	44.9
20-21	82.9	83.8	80.9	22.8	22.9	25.1	64.0	64.7	60.6
	Hispanic								
Female									
16-17	41.9	47.6	49.5	36.7	32.8	31.8	26.5	32.0	33.8
18-19	57.2	58.3	64.7	22.3	20.2	19.3	44.5	46.5	52.2
20-21	60.3	65.2	63.3	19.1	13.9	14.3	48.8	56.1	54.3
Male									
16-17	60.0	65.2	68.3	37.9	43.3	38.8	37.3	37.0	41.8
18-19	76.2	78.1	78.9	16.0	21.6	25.1	64.0	61.2	59.1
20-21	77.7	85.5	85.3	13.3	17.9	16.9	67.3	70.2	70.9
	White								
Female									
16-17	62.4	61.5	61.1	25.0	24.9	24.9	46.8	46.2	45.9
18-19	74.0	71.9	70.1	17.4	12.6	15.8	61.1	62.8	59.0
20-21	73.5	74.7	70.9	11.2	11.8	9.5	65.3	65.9	64.2
Male									
16-17	64.4	68.6	66.1	23.3	25.8	28.0	49.4	50.9	47.6
18-19	77.7	77.0	77.1	12.8	14.7	17.8	67.8	65.7	63.4
20-21	83.0	82.6	81.3	8.6	9.8	13.3	75.8	74.5	70.5
	Total								
Female									
16-17	59.2	58.1	57.4	28.8	28.3	28.9	42.2	41.7	40.8
18-19	71.5	70.1	68.8	20.5	16.1	18.6	56.8	58.8	56.0
20-21	71.9	72.9	69.8	14.4	14.2	12.4	61.5	62.5	61.1
Male									
16-17	63.4	66.2	64.6	28.1	29.3	31.0	45.6	46.7	44.6
18-19	76.9	76.4	76.4	15.6	17.1	20.7	64.9	63.5	60.6
20-21	82.6	82.9	81.5	10.6	11.8	15.1	73.9	73.1	69.2

UNIVERSE: Civilians born in 1957-64 age 16-21 on interview date (N=24,580,000) in 1979 and (N=24,700,000) in 1980 and (N=23,580,000) in 1981.

Table 2.4 Employment Status of Youth Age 22-24 by Sex and Race

Sex	Labor force participation rate	Percent unemployed	Employment/ population ratio
	Black		
Female	70.6	23.2	54.2
Male	86.7	21.8	67.8
Total	78.1	22.5	60.5
	Hispanic		
Female	63.3	13.0	55.1
Male	86.8	18.1	71.1
Total	74.4	15.8	62.7
	White		
Female	75.3	6.1	70.7
Male	87.6	11.2	77.8
Total	81.5	8.9	74.3
	Total		
Female	73.9	8.8	67.4
Male	87.4	12.8	76.2
Total	80.6	11.0	71.8

UNIVERSE: Civilians born in 1957-59 age 22-24 on interview date, 1981.
(N=9,075,000)

Table 2.5 compares the employment status of older youth who completed high school but are not currently enrolled in college with that of those who did not complete high school. Youth who have completed high school, irrespective of race and sex, are favored. Particularly large differences were present for female dropouts who had an LFPR 60 percent less; whose unemployment rate was nearly four times higher and for whom the employment/population ratio was less than half than that of graduates.

Although high school graduates had lower unemployment rates than dropouts, differences by race remained. For example, black nonenrolled male graduates had a higher unemployment rate than white male high school dropouts, 19 percent versus 16 percent.

III. EMPLOYMENT STATUS AND HEALTH

Youth not employed during the survey week were asked if health prevented employment, and employed youth and youth not prevented from working by health were asked if health limited the kind or amount of work they could perform. A youth responding positively to any of these inquiries was noted as having a health restriction.[4] Youth with health-related work restrictions were, as one would expect, less likely to be in the labor force than youth without health restrictions; for the entire group 52 percent versus 74 percent (Table 2.6). In addition, youth with health restrictions had more unemployment.

Women with health restrictions, especially blacks and Hispanics, were the least likely group to participate in the labor force. Less than a third of black and Hispanic females with poor health were in the work force. Black females with health restrictions had the highest unemployment rate, 47

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[4] Overall, 5 percent of youth age 16-21 reported either being prevented from working or restricted because of health.

Table 2.5 Employment Status of Youth Age 22-24 by School Enrollment Status, Race and Sex

Educational status	Labor force participation rate			Percent unemployed			Employment/ population ratio		
	Female	Male	Total	Female	Male	Total	Female	Male	Total
	Black								
High school dropout	42.5	82.4	65.6	47.7	33.3	37.3	22.2	54.9	41.2
Nonenrolled high school graduate	80.6	93.4	86.3	18.4	18.6	18.5	65.8	76.0	70.3
	Hispanic								
High school dropout	40.4	94.0	66.8	33.3	24.2	27.0	26.9	71.3	48.8
Nonenrolled high school graduate	76.9	88.6	82.1	6.7	10.9	8.7	71.8	79.0	75.0
	White								
High school dropout	49.7	92.2	73.5	19.7	15.6	16.8	39.9	77.8	61.2
Nonenrolled high school graduate	79.7	95.1	86.8	5.3	10.9	8.1	75.5	84.7	79.7
	Total								
High school dropout	46.7	90.0	70.8	27.0	20.5	22.4	34.1	71.6	55.0
Nonenrolled high school graduate	79.7	94.6	86.5	6.9	11.8	9.4	74.2	83.4	78.4

UNIVERSE: Civilians born in 1957-59 age 22-24 on interview date, 1981. (N=7,283,000)

Table 2.6 Employment Status by Health Restrictions, Sex and Race

Sex	Labor force participation rate		Percent unemployed		Employment/ population ratio	
	Health restrictions		Health restrictions		Health restrictions	
	No	Yes	No	Yes	No	Yes
	Black					
Female	62.9	30.7	33.2	46.8	42.0	16.3
Male	73.9	63.9	31.5	21.9	50.7	49.9
Total	68.3	44.7	32.3	31.7	46.2	30.5
	Hispanic					
Female	63.7	29.0	18.1	28.8	52.2	20.7
Male	81.1	51.0	23.9	a	61.7	35.0
Total	72.6	35.8	21.4	30.0	57.0	25.1
	White					
Female	71.1	51.3	12.5	23.7	62.2	39.1
Male	79.1	63.4	16.1	30.0	66.3	44.3
Total	75.2	55.4	14.5	26.2	64.3	40.9
	Total					
Female	69.5	46.6	15.5	26.0	58.8	34.4
Male	78.5	62.6	18.5	28.6	64.0	44.7
Total	74.1	52.2	17.1	27.1	61.4	38.0

[a] Insufficient number of sample cases.

UNIVERSE: Civilians born in 1957-64 age 16-24 on interview date, 1981.
(N=32,662,000)

percent. Black males with poor health, while participating less in the labor force, had a lower unemployment rate than youth with no health restrictions. Among youth with poor health, black males also had the lowest unemployment rate.

Information on employment status was also available for youth age 16-24 who were obese.[5] Table 2.7 compares employment status of youth by race, sex, and obesity. Overall, the employment status of males is similar between youth who are overweight and those who are not. Obese females were, however, less likely to be in the work force and incurred a higher incidence of unemployment and a lower employment/population ratio than non-obese females.[6] Among black males, the obese have a more favorable employment status than non-obese youth. Apparently obesity is more likely to reduce the employment prospects of females, especially among blacks, than of males.

IV. CONCLUSIONS

The employment status of youth age 16-21 remained basically similar across NLS surveys. Unemployment in 1981 showed a slight increase from the previous surveys and the increase was more pronounced for males, especially among whites. The incidence of unemployment, however, continued to be compounded for minority youth, females, and the youngest age groups. The employment status of youth older than age 21 showed them to be in a more favorable situation than younger youth. Nevertheless, minority youth,

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[5] Obesity is defined as having a weight greater than 25 percent than the mean weight for a given height.

[6] In the 1981 NLS, data was not available to identify pregnant women. Consequently, the incidence of obesity may be overstated. However, women who reported being restricted or prevented from working because of a health condition attributed to childbirth/pregnancy were excluded.

Table 2.7 Employment Status by Obesity, Sex and Race

Sex	Labor force participation rate Obese No	Labor force participation rate Obese Yes	Percent unemployed Obese No	Percent unemployed Obese Yes	Employment/ population ratio Obese No	Employment/ population ratio Obese Yes
	Black					
Female	61.6	52.8	32.9	40.8	41.3	31.3
Male	73.1	81.8	31.6	16.9	49.9	68.0
Total	67.4	59.8	32.2	32.9	45.7	40.2
	Hispanic					
Female	61.2	47.2	18.3	24.8	50.0	35.4
Male	79.4	83.6	24.0	25.2	60.3	62.6
Total	70.2	66.2	21.5	25.1	55.1	49.6
	White					
Female	70.1	64.9	12.9	16.3	61.0	54.3
Male	78.4	81.2	16.4	19.7	65.5	65.2
Total	74.2	72.2	14.7	18.0	63.3	59.2
	Total					
Female	68.4	61.0	15.6	21.6	57.7	47.8
Male	77.7	81.5	18.8	19.9	63.1	65.3
Total	73.1	69.5	17.3	20.8	60.4	55.1

UNIVERSE: Civilians born in 1957-64 age 16-24 on interview date, 1981.
(N=32,662,000)

especially blacks, continued to suffer substantial unemployment after making the transition into adulthood.

As one would expect, health-related work restrictions reduce participation in the work force. Furthermore, youth with poor health also had higher unemployment than youth without health restrictions. The effects of poor health were especially acute for black and Hispanic females, while the employment status of black males did not appear to be affected by poor health. Further, the effects of obesity on employment status were less favorable for females than for males.

APPENDIX 2A

CPS-NLS DIFFERENCES IN EMPLOYMENT STATUS OF YOUTH AGE 16-21, 1981

Introduction

Differences between the youth employment status estimates of the Current Population Survey (CPS) and the National Longitudinal Surveys (NLS) are not a recent finding.[1] In the 1979 survey, the NLS obtained an 18 percent higher LFPR than the CPS for youth age 16-21, a 35 percent higher unemployment rate, and an 11 percent higher employment/population ratio. The CPS-NLS differences were greatest among the youngest youth (age 16-17) and those whose major survey week activity was school. A variety of explanations could account for the CPS-NLS differences, but the most likely is the NLS directly interviews the youth, whereas CPS assignment of labor force status is usually based on the response of the parent or another responsible adult household member.

In the 1981 survey, the NLS obtained a 20 percent higher LFPR than the CPS for youth age 16-21, a 15 percent higher unemployment rate, and a 16 percent higher employment/population ratio. Overall, the NLS continues to obtain higher LFPR and employment/population ratios than the CPS, but unemployment differences appear to decline. Differences in the 1979-81 surveys and the CPS in youth employment status are examined in this appendix by age and major survey week activity.[2]

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[1] R. Santos, "Measuring the Employment Status of Youth: CPS-NLS Differences." Proceedings of the Thirty-Third Annual Meeting (Madison, WI: Industrial Research Association, September 1980), p. 62-68.

[2] In the 1979 NLS and 1981 NLS, the CPS month selected for comparison was March. In 1980, the month selected for comparison was February.

Survey Differences by Age

Table 2A.1 presents the CPS-NLS employment status differences by age, race, and sex in the 1979-81 surveys.[3] Overall, the NLS had a consistently higher LFPR and employment/population ratio. Survey differences in unemployment decline among blacks age 16-17; the percentage point differences in unemployment declined from 14 and 10 points in 1979 to 4 percentage points in 1981 for females and males, respectively. These differences in unemployment rates occurred, as noted in Chapter 2, largely because the CPS unemployment rate increased between 1979-81 whereas the NLS remained constant.

Survey Differences by Major Activity

Table 2A.2 shows the employment status differences in percentage points in the 1979-81 surveys. CPS-NLS differences are concentrated in youth whose major survey activity is school. As in the case of the youth age 16-17, the NLS obtained a consistently higher LFPR and employment/population ratio. Overall, the unemployment percentage point differences between surveys declined from 10 points in 1979 to 8 points in 1981.

The unemployment differences between surveys are, however, not uniform by race and sex. For example, the unemployment decline occurred basically for females whose major survey week activity was school, from a 14 point difference in 1979 to a 9 point difference in 1981. Furthermore, the decline in unemployment differences was especially dramatic for black females whose major survey week activity was school. In 1979, the NLS estimated 25 percentage points higher unemployment rate than the CPS for black females but

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[3] In order to compare youth in the NLS and the CPS surveys, the white and other race cohort are combined with the Hispanic cohort. Furthermore, the CPS includes other races in the black category while the NLS does not.

Table 2A.1 Percentage Point Differences in Employment Status Between the NLS and CPS, 1979-1981 Surveys by Sex, Race and Age[a]

Sex and Age	Labor force participation rate differences			Percent unemployed differences			Employment/ population ratio differences		
	1979	1980	1981	1979	1980	1981	1979	1980	1981
	Black								
Female	19.7	15.5	19.2	13.9	8.5	3.8	6.0	5.9	10.3
16-17	25.1	21.2	18.9	17.5	14.1	12.1	7.4	6.8	4.9
18-19	22.2	17.0	22.8	14.6	-2.3	-0.2	7.1	12.0	15.6
20-21	11.2	8.6	14.4	8.4	11.7	1.1	2.7	-0.6	9.6
Male	19.0	22.3	18.8	7.3	-2.7	2.9	8.3	16.3	13.6
16-17	30.5	29.1	32.6	10.0	5.4	4.0	11.2	14.0	16.7
18-19	16.6	20.2	19.3	6.4	-8.5	6.0	7.5	19.7	9.0
20-21	7.1	18.5	12.9	-0.4	-6.4	-3.7	5.8	17.1	12.2
	White								
Female	9.8	11.8	10.2	6.4	4.3	3.1	4.3	7.4	6.8
16-17	15.1	18.4	17.0	9.4	8.4	5.9	7.0	10.2	10.1
18-19	10.2	11.8	9.8	6.3	0.3	2.8	4.4	8.4	6.6
20-21	4.5	7.9	4.1	3.2	3.6	0.6	1.8	4.6	3.3
Male	8.7	10.7	9.0	1.9	2.4	1.6	6.2	7.3	6.2
16-17	13.8	20.8	19.2	4.7	8.0	6.5	8.1	11.4	10.6
18-19	7.4	7.5	6.8	0.4	1.1	0.8	6.2	5.6	5.0
20-21	4.8	3.7	0.8	0.0	-2.3	-2.4	4.3	5.1	2.5
	Total								
Total	10.9	12.4	11.5	5.0	3.3	2.7	5.8	8.2	7.7
Female	11.5	12.6	11.9	7.4	4.7	4.1	5.0	7.6	7.7
Male	10.2	12.5	11.2	2.7	2.0	2.0	6.7	8.8	7.5

[a] CPS figures are for March 1979, February 1980, and March 1981.

[b] NLS excludes other races in Black category. CPS includes other races in Black category.

[c] NLS includes all Hispanics and other races in White category. CPS includes white Hispanics but not other races in White category.

UNIVERSE: Civilians born in 1957-64 age 16-21 on interview date. (N=24,580,000) in 1979, (N=24,700,000) in 1980, and (N=23,580,000) in 1981.

Table 2A.2 Percentage Point Differences in Employment Status by Major Activity, 1979-1981 Surveys, by Sex and Race

Sex and major activity	Labor force participation rate differences			Unemployment rate differences			Employment/ population ratio differences		
	1979	1980	1981	1979	1980	1981	1979	1980	1981
	Black								
Total									
School	27.9	25.1	24.6	18.4	12.1	12.2	8.5	9.5	8.6
All other	8.4	5.8	10.8	4.0	-4.2	-2.6	3.1	7.5	9.7
Male									
School	28.5	26.7	27.0	12.9	7.1	14.0	9.5	12.0	9.4
All other	3.9	4.8	7.5	1.1	-9.0	-3.3	2.0	11.4	8.2
Female									
School	27.4	23.5	22.4	24.8	17.4	10.2	7.5	6.9	8.0
All other	11.5	4.9	12.4	7.1	1.0	-1.6	3.3	2.9	9.8
	White								
Total									
School	13.4	16.9	12.8	8.1	8.5	6.9	6.8	9.5	6.8
All other	2.4	2.8	3.2	2.0	0.3	0.0	0.5	2.2	2.7
Male									
School	12.8	17.2	13.2	5.3	7.1	6.7	7.6	10.1	6.9
All other	1.4	0.6	1.7	-0.1	-0.6	-1.2	1.2	1.0	2.5
Female									
School	14.1	16.5	12.4	11.1	10.1	7.1	5.9	8.9	6.7
All other	3.6	4.9	4.9	4.0	1.3	1.4	0.0	3.3	3.1
	Total								
Total									
School	15.9	18.5	15.0	10.3	9.6	8.4	7.3	9.9	7.6
All other	3.4	3.3	4.2	2.0	-0.3	-0.3	1.2	3.1	3.8
Male									
School	15.3	19.0	15.6	7.1	7.6	8.1	8.3	11.0	7.9
All other	1.7	1.1	2.3	0.0	-1.5	-1.2	1.5	2.3	3.1
Female									
School	16.3	17.9	14.3	13.7	11.7	8.6	6.3	.8	7.2
All other	4.9	5.0	6.1	4.2	1.0	0.9	1.0	3.7	4.5

[a] CPS figures are for March 1979, February 1980, and March 1981.

[b] NLS excludes other races in Black category. CPS includes other races in Black category.

[c] NLS includes all Hispanics and other races in White category. CPS includes white Hispanics but not other races in White category.

UNIVERSE: Civilians born in 1957-64 age 16-21 on interview date.
(N=24,580,000) in 1979, (N=24,700,000) in 1980, and (N=23,580,000)

the difference declined to 10 points in 1981. For males in school, the NLS obtained a 7 to 8 point higher unemployment rate than the CPS in each of the survey years.

Summary

The NLS continues to obtain higher LFPR, unemployment rates and employment/population ratios than the CPS. The differences are accented for the youngest youth age 16-17 and youth whose major survey week activity was school. It is the youngest age youth and those in school where a direct interview as conducted by the NLS or the proxy respondent method used by the CPS could make a difference in determining labor force status.

Unemployment differences between surveys have, however, declined substantially, especially among females. In the NLS, the incidence of unemployment has remained remarkably consistent over the different surveys. In the CPS, the unemployment of youth age 16-21 has shown a marked increase, reflecting the deteriorating economic conditions, thus, the decline in survey differences.

CHAPTER 3

EARNINGS GROWTH DIFFERENCES BETWEEN YOUNG MALES AND FEMALES

by Tom K. Pollard

I. INTRODUCTION AND SAMPLE DEFINITION

Female workers on average earn lower wages than their male counterparts. This difference is present at the time young people first leave school to enter employment, and it widens as the workers age. In this paper we accept this initial wage difference as a given and identify those factors which lead to its increase as the young workers age.

We focus on male/female differences in the mobility process among those youth dedicated to labor market participation. In selecting the sample we wished to exclude those persons with little or no attachment to the work force and include those who were dedicated but had high turnover or extensive unemployment. Toward this end we selected a cohort composed of those youth who had been out of school at least a year as of the 1979 survey, and, since leaving school, had held a job for at least 20 hours per week which lasted for at least two months. Further, in order to obtain a later wage measure, we limited the sample to those who had been employed at some time between the 1980 and 1981 NLS Youth surveys.

The length of first job and the requirement that the sample members had been out of school for a year increases the probability that the first job is meaningful and that we have a sample that is permanently out of school and not simply out of school on a short term basis. Our use of a cohort of youth who reported a meaningful first job and who were also employed during a later period produces more valid results than a simple comparison of the wages of the entire sample at two points in time. The use of the entire sample employed at each point would allow the inclusion of recent labor market entrants in the latter sample, thus giving a downward bias to a measure of wage growth between the two periods. This bias would certainly be greater among females since a large percentage of female dropouts leave school because of marriage and/or pregnancy and enter the labor market after a delay.

However, the requirement that the cohort be employed at two points in time is potentially very restrictive, given the high unemployment and turnover in and out of the labor force among youth. The greater the unemployment among a group, the lower the probability that a person within that group will be employed at the two points in time needed to look at mobility. Again, this problem is especially acute for females, with the danger that the greater selectivity among females might complicate the comparison of male and female wage growth. We believe, however, that this selectivity problem is tempered sufficiently by considering the "first" job, which can occur at any time over a three to five year period, and the latest job held during the year prior to the 1981 survey, which is a fairly wide range.

Finally, we examine separately the wage growth of high school dropouts and graduates, for several reasons. First, given our age distribution, dropouts will have entered the labor market before graduates so that wages on the first job out of school for graduates will be higher than those for dropouts, both because of time passing (with the attendant inflation) and because of higher educational attainment. Second, when looking at change from first to 1981 job, the time elapsed is greater on average for dropouts. Finally, female dropouts show fundamentally different employment patterns from their graduate counterparts, dropouts being much more likely not to enter the labor force upon leaving school but to enter it after a delay, while female graduates are much more likely to enter the labor force immediately after graduation and then filter out if marriage and family responsibilities take precedence over labor market activities. Therefore, early male and female employment patterns are much more similar among graduates than among dropouts. To combine the work experience of dropouts and graduates would complicate the determination of the causes of differences in wage growth among males and females who are equally dedicated to labor force participation.

The differing patterns of dropouts and graduates are evident when one considers the proportion of out-of-school youth who reported having a first job on or before the 1979 survey and the proportion of that first job sample who had a job during 1981.[1] Approximately 90 percent of male dropouts and graduates reported a first job (almost 100 percent of white males and 85 percent of minority males). Eighty five percent of the whites with a first job also reported a 1981 job, compared to 65 percent of the minorities with a first job. Therefore our wage growth analysis sample consists of 85 percent of white males and 55 percent of minority males.

Among females there is a substantial difference between dropouts and graduates in the percentages reporting first and 1981 jobs. Only 50 percent of minority female dropouts reported a first job and only half of these first job holders reported a 1981 job. Therefore only 25 percent of minority female dropouts are included in the wage growth analysis. Among white female dropouts 70 percent reported a first job and two thirds of this group had a 1981 job; therefore, a substantially larger proportion (46 percent) of white than minority female dropouts is included in our analysis, but just over half the proportion of white male dropouts.

Ninety percent of white female graduates and 85 percent of black and

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[1] It is this final stage of selection which yields the sample for our analysis.

Hispanic female graduates reported a first job. About 80 percent of these white females and 70 percent of these minority females also had a 1981 job. Therefore, among female graduates 72 percent of whites and 60 percent of minorities are included in our wage growth analysis sample, which is much closer to the male sample size than among dropouts.

The attrition between the first and 1981 jobs is due to movement into chronic unemployment or out of the labor force as well as to noninterview. (Since we only consider jobs held between the 1980 and 1981 surveys those with no job during this period are excluded from the sample.) Among males the most important reasons for attrition were: entrance into the military, 30 percent; chronic unemployment, 28 percent; and noninterview, 36 percent. Among females the military accounted for only 10 percent of the attrition, while 50 percent was due to young women leaving the labor force to assume responsibilities in the home, 15 percent due to chronic unemployment, and 18 percent due to noninterview in 1981.

As the preceding discussion has shown, our male and female samples are very selective, especially among females. We are by no means comparing average males and females, but are comparing the wage growth of males and females with relatively stable employment patterns. Our goal is to differentiate between males and females in the payoff to this stability.

II. COMPARISON OF FIRST AND 1981 JOB CHARACTERISTICS

The data show clearly that in the interval between the first and 1981 jobs the average hourly wages and average skill levels of male and female sample members diverged. Among white dropouts the mean wage of females was .85 that of males on their respective first jobs and .75 on their 1981 jobs (Table 3.1). Among graduates the ratio was .77 on the first job and .72 on the 1981 job. The same patterns prevail among minorities, but the female/male ratio is higher than for whites in each case because of a combination of higher wages among women and lower wages among men.[2]

Also evident among whites is a faster wage growth among high school graduates than among dropouts. Wages grew between first and 1981 job by 50 percent for white female dropouts and 65 percent for white female graduates.[3] The advantage is evident also among white males, although it is less marked: dropouts' wages grew by 70 percent while graduates' wages grew by 75 percent. Minorities show the opposite trends, the growth in wages among dropouts being larger than that among graduates.

The Specific Vocational Preparation (SVP)[4] for the first job compared to that required for the 1981 job follows similar patterns among white dropouts and graduates, indicating that the skills required for male and female jobs are diverging also. The average SVP on the first jobs of white female dropouts was .55 that of males and had fallen to .50 as of the 1981 job (Table 3.1). The female/male SVP ratio on the first job was higher among graduates, .76, but declined by 1981 to .69.

Minorities show an opposite trend to that of whites, with the ratio of female/male SVP increasing from first to 1981 job. Among minority dropouts the increase in the ratio of female to male SVP was from .65 on the first job

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[2] The minority group is made up of blacks and Hispanics.

[3] The reader should keep in mind that the period between first and current job tends to be longer for dropouts than for graduates, which for purposes of comparison imparts an upward bias on the wage growth figure for dropouts.

[4] Specific Vocational Preparation is a scale measuring the amount of time required to learn and perform with average facility a specific job. For a complete discussion of this measure see Manpower Administration of the United States Department of Labor, Handbook for Analyzing Jobs, Washington D.C.: U.S.G.P.O., 1972, Appendix B.

Table 3.1 Sample Means of Selected Characteristics of First Job and of 1981 Job, by Educational Attainment, Race, and Sex

	Hourly wage rate		Specific vocational preparation		Tenure (in months)		Hours worked per week		
	First job	1981 job	First job	1981 job	First job	1981 job	First job	1981 job	Population (000's)
High school dropouts									
Male	3.00	5.17	1.00	1.41	15	15	40	40	821
Minority	2.90	5.20	.85	1.19	15	16	39	39	248
White	3.04	5.15	1.06	1.51	16	14	40	41	572
Female	2.63	3.96	.58	.78	10	14	35	35	507
Minority	2.81	4.38	.55	.89	13	12	36	34	91
White	2.59	3.87	.58	.76	10	15	35	35	416
All dropouts	2.86	4.71	.83	1.17	13	15	38	38	1,327
High school graduates									
Male	3.64	6.36	1.09	1.69	18	24	40	40	1,570
Minority	3.42	5.77	.96	1.17	14	21	39	40	178
White	3.67	6.44	1.10	1.75	19	25	40	41	1,392
Female	2.82	4.59	.83	1.18	16	20	36	36	1,341
Minority	2.94	4.46	.73	.94	10	20	36	38	209
White	2.81	4.61	.84	1.21	16	20	36	36	1,550
All graduates	3.25	5.48	.96	1.43	17	22	38	38	3,121
Total sample	3.13	5.25	.92	1.36	16	20	38	38	4,448

UNIVERSE: Civilian youth aged 14-21 as of 1/1/79, who left school prior to 1/1/78, reported a first job out of high school and a job between the 1980 and 1981 surveys. (Weighted N=4,447,900; Unweighted N=1519).

to .75 on the 1981 job and among graduates the increase was from .76 to .80 between the two jobs.

Females were more likely to work part time and to work for a shorter period of time on both their first and 1981 jobs (Table 3.1). The male/female differences in tenure were smaller for graduates than for dropouts and smaller in 1981 than for the first job for both dropouts and graduates. The trends indicate decreasing turnover among both groups and show some convergence in the patterns of males and females.

Average tenure on first and 1981 jobs was substantially greater among graduates than among dropouts. Although males show longer tenure, the stability of females is impressive.[5] Within all subgroups blacks and Hispanics show shorter tenure on their first jobs but have closed the gap by their 1981 jobs.

Average hours per week worked on first job is the same for dropouts and graduates and across race groups, but varies for males and females. Furthermore, the male/female differences persist on the 1981 job. Males average 39-40 hours per week while females averaged 35-36 hours per week on their first jobs as well as on their 1981 jobs. The comparisons of tenure and hours per week indicate higher turnover and more part time work among females, but the differences seem too small to yield the observed divergence in wages between the first and 1981 jobs.[6]

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[5] It should be remembered that the 1981 measures are truncated at the survey date for those persons employed on the survey date and thus will understate actual tenure for these persons.

[6] Two of the reasons often cited for male/female differences in mobility are the relatively unstable employment patterns of females and their concentration in jobs which offer few training and advancement possibilities. There is further debate over whether or not women in part time or short term jobs are there by choice, i.e., scheduling work around family responsibilities and sacrificing training for pay because they expect to exit the labor force and,

The distributions of white male and female first and 1981 occupations show the frequently found occupational segregation (Tables 3.2 and 3.3). Further, Table 3.4, constructed from weekly earnings data from the Current Population Survey, shows that females are concentrated in those jobs which pay the least to males as well as females. The concentration of females in these low paying occupations certainly contributes to their low pay relative to males, who are more evenly distributed across the lower and higher paying occupations.

Among white dropouts over 50 percent of the first jobs of young women were in the service occupations, 20 percent in the clerical occupations, and 14 percent in the operative occupations (Table 3.2). Male dropouts were most highly represented in the crafts (22 percent), laborer (28 percent), and operatives (19 percent) occupations. Further, unlike the majority of white female dropouts, only 13 percent of white male dropouts had their first job in the service occupations. Table 3.4 shows that with the exception of farm laborers, service occupations are the lowest paying for both males and females.

Relative to white female dropouts, white female graduates were more likely to work first in clerical, sales, and professional, technical, and kindred occupations and less likely to work first in operative and service occupations. Half of the white female graduates had first jobs in clerical occupations, 31 percent in service occupations, and 9 percent in operative occupations (Table 3.3). The first jobs of white male graduates, on the other hand, were concentrated in the same occupations as those of white male

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thus, would not benefit from training. Since our sample is restricted to youth with a continuing attachment to the labor market, we believe only to a very limited degree can the male/female differences in turnover and occupational distribution we present be attributed to male/female differences in motives for employment.

Table 3.2 Occupational Distributions for First and 1981 Jobs of High School Dropouts, Presented by Sex and Race
(Percentage distribution)

	Males						Females						Total population	
	Minority		White		Male total		Minority		White		Female total			
	First	1981	First	1981	First	1981	First	1981	First	1981	First	1981	First	1981
Professional, technical, and kind	1	2	1	4	1	3	-	4	-	1	-	2	1	3
Managers	-	-	-	3	-	2	-	2	-	3	-	3	-	2
Sales	2	2	-	3	1	2	1	11	7	6	6	7	3	4
Clerical	2	4	4	4	3	4	18	20	20	33	19	30	10	14
Crafts	12	22	22	26	19	25	-	1	1	1	1	1	12	16
Operatives, except transport	21	23	19	26	20	25	18	24	14	22	15	22	18	24
Transport operatives	5	6	5	8	5	7	-	-	-	2	-	2	3	5
Laborers, except farm	24	15	28	17	27	16	1	4	2	-	2	1	17	10
Farmers	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Farm laborers	9	4	6	3	7	4	6	3	2	1	2	1	5	3
Service, except private household	24	22	13	8	17	12	55	30	53	25	54	26	31	17
Private household	-	-	-	-	-	-	1	-	1	6	1	5	-	2
Population (000's)	248		572		821		91		416		507		1327	

UNIVERSE: Civilian youth aged 14-21 as of 1/1/79, who left school prior to 1/1/78, reported a first job out of high school and a job between the 1980 and 1981 surveys. (Weighted N=4,447,900; Unweighted N=1519).

Table 3.3 Occupational Distributions for First and 1981 Jobs of High School Graduates, Presented by Sex and Race (Percentage distributions)

	Males						Females						Total population	
	Minority		White		Male total		Minority		White		Female total			
	First	1981	First	1981	First	1981	First	1981	First	1981	First	1981	First	1981
Professional, technical, or kind	1	2	1	5	1	5	1	4	1	3	1	3	1	4
Managers	3	6	4	5	4	5	1	4	4	6	4	6	4	5
Sales	2	1	4	5	4	5	7	2	8	8	8	8	6	6
Clerical	9	7	4	9	5	9	39	40	43	46	42	45	23	27
Crafts	14	15	19	31	18	30	-	4	1	3	1	3	10	17
Operatives, except transport	15	25	20	19	20	19	18	17	8	9	10	10	15	15
Transport operatives	6	12	6	7	6	7	1	2	-	-	-	-	3	4
Laborers, except farm	16	12	21	11	21	11	2	1	3	2	3	2	12	6
Farmers	-	-	1	-	-	-	-	-	-	-	-	-	-	-
Farm laborers	2	2	5	3	5	2	1	-	-	-	-	-	2	1
Service, except private household	32	18	15	5	16	7	29	24	31	21	30	21	24	14
Private household	-	-	-	-	-	-	1	2	1	2	1	2	-	1
Population (000s)	179		1392		1570		209		1341		1550		3121	

UNIVERSE: Civilian youth aged 14-21 as of 1/1/79, who left school prior to 1/1/78, reported a first job out of high school and a job between the 1980 and 1981 surveys. (Weighted N=4,447,900; Unweighted N= 1519).

Table 3.4 Median Weekly Earnings in 1980 of Full-Time Wage and Salary Workers by Occupation and Sex

	Male	Female	Total
Professional and technical	$406	$287	$341
Managers and administrators, except farm	435	257	380
Sales workers	337	176	279
Clerical workers	305	199	215
Craft workers	334	213	328
Operatives, except transport	275	174	225
Transport equipment operatives	290	213	286
Nonfarm laborers	227	172	220
Service workers	224	149	180
Farm workers	173	141	169

Source: U.S. Department of Labor, Bureau of Labor Statistics. Employment and Earnings. April, 1981. Table 5, p. 83.

dropouts.

The occupational distributions of both males and females show substantial change between the first and 1981 jobs. Most of the change, however, is just redistribution among those categories which were important male or female first job occupations. There is very little movement by 1981, for example, of females into jobs which were male dominated as of the first job. Among white female dropouts, clerical and operative occupations gained representation at the expense of service occupations. In 1981 services accounted for 25 percent of the total 1981 jobs, clerical 33 percent, and operatives 22 percent. In general white male dropouts showed movement out of laborer occupations and into craft and operative jobs.

Minority male dropouts in their first jobs were represented to a lesser extent than whites in craft, operative, and laborer occupations and were represented more heavily in service occupations. The minority males in our sample do show growth in craft occupations by 1981, but also show less of a decline in service occupations and less growth in operative occupations than white male dropouts. Among both males and females, minorities are more concentrated in service and operative occupations in 1981.

By 1981, white female graduates show much greater representation in professional and managerial occupations relative to their first jobs and to the 1981 jobs of female dropouts, their representation in these occupations being equal to that of males. Although female graduates broadened their occupational representation somewhat between their first and 1981 jobs, most of their movement, as for dropouts, was between the female dominated occupations. White male graduates increased employment in the craft occupations while decreasing their employment in the service occupations. Among both male and female graduates, minorities remained, in 1981, overrepresented in the service and operative occupations.

The distributions of first jobs by industry show the importance of wholesale and retail trade as a source of employment for youth just out of high school. Almost 60 percent of white female dropouts and just over 25 percent of white male dropouts worked first in this industry (Table 3.5). The service industry was next in importance, providing 22 percent of the jobs for both male and female dropouts. Construction was a substantial first employer of young men but not of young women, and, although manufacturing provided a fair number of jobs to both male and female dropouts, males were concentrated in durable and females in nondurable manufacturing.

By 1981 white female dropouts had moved out of trade, the percentage working in this industry decreasing from 60 percent to 32 percent, and more moved into the services and nondurable manufacturing sectors. The change for males was less substantial, although males did increase their employment in manufacturing at the expense of all other major sectors.

Among graduates 49 percent of white females and 42 percent of white males worked first in wholesale and retail trade (Table 3.6). Much as was the case among dropouts, female graduates showed relative concentration in services and males were more highly represented in construction and manufacturing.

Wholesale and retail trade was of less importance among both male and female graduates than among dropouts. Males moved mainly toward manufacturing while females leaving jobs in the trade sector entered service industries, finance, insurance, and real estate, and, to a lesser extent than for males, manufacturing.

III. SUMMARY

The average employment situation of females deteriorates relative to

Table 3.5 Industrial Distributions of First and 1981 Jobs for High School Dropouts, Presented by Sex and Race
(Percentage distributions)

	Males						Females						Total population	
	Minority		White		Male total		Minority		White		Female total			
	First	1981	First	1981	First	1981	First	1981	First	1981	First	1981	First	1981
Agriculture, mining, and construction	21	23	30	26	27	25	6	7	2	3	3	3	18	17
Durables manufacturing	11	18	13	22	12	21	5	8	5	9	5	9	9	17
Nondurables manufacturing	9	8	7	8	8	8	14	19	10	16	11	17	9	11
Transportation and communication	4	4	2	3	3	4	-	-	2	3	2	3	2	3
Wholesale and retail trade	29	21	26	20	27	21	37	28	59	32	55	31	38	25
Finance, insurance, and real estate	1	1	1	1	1	1	2	6	-	7	1	7	1	3
Services and public administration	24	24	22	19	22	21	36	32	22	30	24	30	23	24
Population (000's)	247		578		825		91		416		507		1332	

UNIVERSE: Civilian youth aged 14-21 as of 1/1/79, who left school prior to 1/1/78, reported a first job out of high school and a job between the 1980 and 1981 surveys. (Weighted N=4,447,900; Unweighted N=1519).

Table 3.6 Industrial Distribution of First and 1981 Jobs for High School Graduates, Presented by Sex and Race
(Percentage distributions)

	Males						Females						Total population	
	Minority		White		Male total		Minority		White		Female total			
	First	1981	First	1981	First	1981	First	1981	First	1981	First	1981	First	1981
Agriculture, mining, and construction	13	12	16	20	16	19	1	1	3	1	2	1	9	10
Durables manufacturing	11	18	15	24	15	24	8	10	4	10	4	10	10	17
Nondurables manufacturing	13	12	7	8	8	8	13	13	9	9	10	10	9	9
Transportation and communication	3	13	3	6	3	7	1	2	2	5	2	4	3	6
Wholesale and retail trade	35	22	42	24	42	24	36	21	49	27	47	27	44	25
Finance, insurance, and real estate	2	2	2	2	2	2	8	12	8	12	8	12	5	7
Services and public administration	23	21	15	16	16	17	33	41	26	37	27	37	21	27
Population (000's)	180		1383		1563		209		1341		1550		3113	

UNIVERSE: Civilian youth aged 14-21 as of 1/1/79, who left school prior to 1/1/78, reported a first job out of high school and a job between the 1980 and 1981 surveys. (Weighted N=4,447,900; Unweighted N=1519).

males in the early years of post-school labor market experience even for women with strong labor force attachment. Relative hourly wage rates declined from first job after leaving school to the job held three to five years later for whites and minorities for both high school dropouts and graduates. For white young women there was also a decline in the skill levels of their jobs, as shown by the time required to learn them, relative to men. These deteriorations do not appear due to changes in tenure on the jobs or to changes in the number of hours worked. Rather, the decline in young women's hourly earnings seems to result from their continuing concentration in low-wage occupations while men were more likely to move up the occupational ladder.

Wage rates of white high school graduates and their skill levels increased faster than did those of high school dropouts in the early post-school years, although the reverse is true for minorities. Tenure on the job, however, increased more rapidly for all graduates.

CHAPTER 4

GOVERNMENT EMPLOYMENT AND TRAINING:
CHANGES, FY 1979 - FY 1980

by Joan E. Crowley

I. INTRODUCTION

Prior reports on the NLS Youth Cohort have presented simple descriptions of the participants in government employment and training programs and of the services which they receive. This report will repeat these descriptions, with a few additions and changes. The major change is that this report compares participants from fiscal year 1979 (FY 1979) to fiscal year 1980 (FY 1980) rather than calendar year, a shift made to allow interested researchers to compare NLS figures with figures from administrative sources. The appendix to this chapter details some of the differences in the data bases which affect the interpretation of the comparisons.

The NLS survey instrument annually includes a lengthy series of questions on participation in government-sponsored employment and training programs. For each program reported, participants were asked to describe the services they received and their perceptions of the effectiveness of the training. Results are not strictly comparable to those from other sources, because the NLS is limited to respondent reports and does not include administrative records as the data base. No doubt, some of the programs reported as being government-sponsored were funded in other ways; because most government-sponsored programs were designed to be run using various local organizations and their wide diversity may confuse respondents. Nevertheless, it is expected that the majority of programs described are CETA (Comprehensive Employment and Training Act) or WIN (Work Incentive) programs, since these are by far the largest source of government employment related programs outside of the educational system.[1]

II. GOVERNMENT PROGRAMS IN FY 1979--FY 1980

The period just preceding FY 1979 saw several major changes in the CETA program.[2] Because of the recession of the late 1970's, Congress had authorized a major counter-cyclical expansion in the number of public service employment positions available. The growing concern about the very high unemployment levels among youth, particularly minorities, led in 1977 to the passage of the Youth Employment Demonstration Projects Act (YEDPA), which provided for several new programs targeted to young people. Finally, the CETA program, established in 1973 for a five year period, was re-authorized in 1978, but with several legislative changes designed to target services to the economically disadvantaged and to improve the effectiveness and tighten managerial control of the programs. Most of the YEDPA programs were incorporated into the CETA re-authorization. Because extensive changes were made in the programs between 1977 and 1978, some local administrations had problems implementing the youth services expansion before the end of 1978; however, by the beginning of FY 1979, the agencies had had nine months to develop their youth services. No major changes were made in the authorizing legislation between

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[1] See the appendix to this paper and Crowley, 1980, for slightly more detailed discussions of this point.

[2] The following discussion is based on information from the Employment and Training Report of the President for the years 1978, 1979, and 1980 (U. S. Department of Labor, 1979, 1980, and 1981.)

1978 and the end of FY 1980, so the period of this report can be viewed as a time of consolidation of existing programs, rather than of implementation of new initiatives.

In contrast to these large legislative modifications to the CETA program, the WIN program has been in place since 1968. Its specific aim is getting people off welfare by requiring job services and placement for all persons who receive AFDC and who are considered able to work.[3] WIN is administered jointly by the Department of Labor and the Department of Health and Human Services, and provides services both through its own separate programs and by directing clients to CETA and other sources.

III. PARTICIPANTS

A total of 1,082 NLS respondents reported participating in government sponsored employment programs in FY 1979, and 985 reported participating in FY 1980. These respondents represent 2,024,000 and 1,907,000 youth, respectively.[4] Table 4.1 shows the characteristics of participants in government sponsored training programs for the two years under consideration. Participation rates, shown in columns 1 and 5, provide the most concise description of the tendency of various groups to be enrolled in government programs.

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[3] The categories considered exempt from the requirement to participate in WIN include youth under the age of 16, full time students, persons who are needed for the care of small children or incapacitated household members, persons who are ill, incapacitated, or aged, or who are so remote from a WIN project that participation is not feasible, or female caretakers of children if there is a male relative in the home who is registered with WIN. This last provision has been credited with the overrepresentation of men in WIN programs relative to their proportion among welfare recipients.

[4] On January 1, 1979, the sample ranges in age from 14 to 21, and in January of 1980, from 15 to 22. The tables presented in this chapter restrict the sample to the ages 15 to 21 for both years, to avoid distortions due to aging. The restriction in fact changes comparisons across years very little.

TABLE 4.1 Comparison of Government Employment and Training Participants with Nonparticipants by Selected Characteristics (Percentage Distribution)

Characteristic	1979				1980			
	Participation rate per 100 population[a]	Participant[a]	Non-Participant[a]	Targeted jobs Tax Credit participant[b]	Participation rate per 100 population[c]	Participant[c]	Non-Participant[c]	Targeted jobs Tax Credit participant[d]
Sex								
Male	7	49	49	40	7	50	49	46
Female	7	51	51	60	6	50	51	54
Race								
Hispanic	12	11	6	4	11	11	6	6
Black	17	35	12	12	17	36	12	13
White	4	54	82	85	4	54	82	81
Age								
Under 17	7	15	15	10	7	15	14	0
16-19	7	64	57	90	7	66	57	83
20-21	5	21	19	0	4	20	29	18
Enrollment status								
High School dropout	8	15	12	22	7	13	12	18
High school student	8	52	42	78	8	55	42	65
College student	5	13	19	-	4	12	18	1
Nonenrolled H.S.Grad.	5	20	28	0	5	20	27	16
Region								
Northeast	6	20	21	28	7	21	21	14
Northcentral	6	29	31	28	6	29	31	48
South	7	33	32	25	6	32	33	23
West	8	18	16	19	7	18	16	15
Number of Programs ever								
None	0	0	90	0	0	0	88	0
One	32	48	7	70	30	47	8	52
More than one	55	52	3	30	48	54	4	48
Poverty (CPO definition)								
Above poverty	5	69	87	63	5	65	85	79
Below poverty	14	31	13	37	14	35	15	21
Economically disadvantaged								
Advantaged	4	26	48	21	4	25	46	20
Disadvantaged	9	74	52	80	9	75	54	81
Percent of Sample		7	93	0.1		7	93	.02

[a] UNIVERSE: Civilians age 15-21 on 1/1/79 (N=27,561,000).
[b] UNIVERSE: Civilians age 15-21 on 1/1/79 and who obtained job through tax credit program (N=261).
[c] UNIVERSE: Civilians age 15-21 on 1/1/80 (N=27,582,000).
[d] UNIVERSE: Civilians age 15-21 on 1/1/80 and who obtained job through tax credit program (N=553).

The targeting of programs to those who have traditionally had more difficulty in obtaining good jobs is evident: participants were equally divided by sex, but blacks and Hispanics are much more likely to participate than whites. Almost one in seven black youth and one in ten Hispanics were enrolled in government employment programs, as compared to one in twenty whites. Youth in poverty were three times more likely than non-poor youth to participate.[5] Using the criteria for economic disadvantage defined in the CETA regulations, the differential is somewhat reduced, but those in the disadvantaged category are over twice as likely to participate as the non-disadvantaged. Reflecting the targeting of programs at the school-age population, high school dropouts and high school students are more likely to participate than are high school graduates or college students.

Among participants, about half reported that they had been in more than one program. The extent of the reach of the programs is also shown in that, among those who had not participated during the year, 10 percent of the respondents in FY 1979 and 12 percent of the respondents in FY 1980 reported that they had been in one or more programs at some point in their lives.

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[5] One major eligibility criterion for participation in government sponsored employment programs is income. Two descriptors of economic status will be presented. One is poverty, according to national CPS criteria, based on total family income and family size. The second is called economic disadvantage, and uses CETA criteria for calculating income. CETA regulations provide for excluding from the family income total certain transitional sources of income, such as unemployment insurance benefits and one-time insurance payments, and CETA uses a slightly less stringent set of cut-points for defining economic disadvantage. Even using the less stringent criterion of economic disadvantage, a quarter of the participants are non-poor, while published figures based on administrative records show a higher proportion of economically disadvantaged among CETA participants. I believe that a major component of this discrepancy is the difference in the calculation period used. The NLS relies on family income figures from the preceding calendar year, while CETA uses income for the six months immediately preceding application. An extensive discussion on this point can be found in the appendix.

Added to current participants, this means that over one in six of the youth between 15 and 21 in FY 1980 had been in one or more government sponsored employment programs.[6]

IV. PROGRAM SERVICES

The previous figures compared program participants with non-participants. The next section describes the types of services provided to various types of participants, a task complicated somewhat by the fact that one individual might have been in more than one program in a given year. Respondents were asked to describe each program separately, and the following tables treat each program as a separate case. Thus, the 1,082 participants from FY 1979 described 1,400 individual programs, and the 985 participants from FY 1980 described 1,295 programs. The individual weights for each participant were applied to each program, so the base number of programs described is 2,613,000 for FY 1979 and 2,426,000 for FY 1980.

Tables 4.2 through 4.6 show the services provided to program participants by race, sex, poverty status, and enrollment status. Again, there were few differences between years. The most commonly reported services are subsidized employment, job counseling, and skills training, activities directly tied to immediate employment. Nine out of ten programs involved some sort of subsidized employment. About one of ten programs were also reported to provide

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[6] The apparent sharp rise in the proportion of youth who report at least one program is at least partly artifactual. The 1979 figures reflect reports of participation in programs which may have been several years past for respondents. Some forgeting is expected. The 1980 figures include those who reported participating between interviews, added to the earlier report. A higher proportion of such recent program enrollments should be recalled, in contrast to the reports covering the entire life. Another reason for a higher prevalence of participation in programs in FY 1980 than in FY 1979 is, of course, the expansion of programs for youth.

TABLE 4.2 Proportion of Participants Receiving Various Services, by Race

	1979[a]				1980[b]			
Services provided	Hispanic	Black	White	Total	Hispanic	Black	White	Total
Job counseling	60	62	45	53	62	59	47	53
Basic education	31	25	21	23	33	26	24	26
English language	13	2	1	2	12	3	1	3
GED	17	16	18	17	22	20	17	18
College preparatory	18	21	13	16	21	22	17	19
Skills training	36	33	35	34	39	31	33	33
Subsidized job	92	93	92	92	90	91	92	92
Non-CETA job placement	11	8	13	11	8	7	9	8
Medical	19	20	12	16	21	18	17	17
Child care	4	9	2	5	8	9	4	6
Transportation	14	20	14	16	19	23	17	20
Other	17	19	11	14	17	23	18	19
Total	11	34	55	100	11	36	53	100

[a] UNIVERSE: Enrollment of civilians age 15-21 on 1/1/79 (N=2,365,000).
[b] UNIVERSE: Enrollment of civilians age 15-21 on 1/1/80 (N=2,286,000).

TABLE 4.3 Proportion of Participants Receiving Various Services, by Sex

Services provided	1979[a]			1980[b]		
	Male	Female	Total	Male	Female	Total
Job counseliong	49	55	53	53	53	53
Basic education	23	24	23	25	27	26
English language	2	3	2	3	3	3
GED	18	17	17	20	17	18
College preparatory	15	17	16	18	21	19
Skills training	28	40	34	29	37	33
Subsidized job	94	91	92	94	89	92
Non-CETA job placement	12	11	11	8	8	8
Medical	18	13	16	23	13	17
Child care	3	6	5	4	8	6
Tranportation	17	15	16	21	18	20
Other (collapsed)	16	13	14	23	16	19
Total	47	54	100	49	51	100

[a] UNIVERSE: Enrollment of civilians age 15-21 on 1/1/79 (N=2,365,000).
[b] UNIVERSE: Enrollment of civilians age 15-21 on 1/1/80 (N=2,286,000).

TABLE 4.4 Proportion of Participants Receiving Various Services, by CETA Definitions of Economically Disadvantaged

Services provided	1979[a]			1980[b]		
	Above Poverty	Below Poverty	Total	Above Poverty	Below Poverty	Total
Job counseling	50	54	53	48	54	53
Basic education	26	23	24	23	27	26
English language	2	3	2	1	4	3
GED	21	16	17	14	20	18
College preparatory	13	17	16	20	19	19
Skills training	35	34	34	29	34	33
Subsidized job	96	91	92	95	91	92
Non-CETA job placement	19	8	11	8	8	8
Medical	15	16	16	20	17	17
Child care	3	5	5	7	6	6
Transportation	15	16	16	18	20	20
Total (collapsed)	10	16	14	23	18	19
Total	26	74	100	23	77	100

[a] UNIVERSE: Enrollment of civilians age 15-21 on 1/1/79 (N=2,360,000).
[b] UNIVERSE: Enrollment of civilians age 15-21 on 1/1/80 (N=2,286,000).

TABLE 4.5 Proportion of Participants Receiving Various Services, by Enrollment Status

Services Provided	1979[a]					1980[b]				
	High school dropout	High school student	College student	Nonenrolled high school graduate	Total	High school dropout	High school student	College student	Nonenrolled high school graduate	Total
Job counseling	61	52	37	55	53	61	49	39	64	53
Basic education	40	17	18	29	23	53	28	10	30	25
English language	4	2	1	2	2	7	1	1	3	3
GED	44	13	4	15	17	48	12	2	20	18
College preparatory	19	17	20	12	16	17	19	25	18	19
Skills training	54	27	28	41	34	43	27	26	42	33
Subsidized job	86	98	93	82	93	74	99	93	86	92
Non-CETA job placement	14	9	8	15	11	3	9	3	11	8
Medical	29	10	15	21	16	31	12	8	25	17
Child care	9	4	4	3	5	12	4	3	9	6
Tranportation	31	13	12	14	16	36	13	11	26	19
Other (collapsed)	20	11	21	11	14	26	16	13	26	19
Total	16	51	13	21	100	16	52	11	22	100

[a] UNIVERSE: Enrollment of civilians age 15-21 on 1/1/79 (N=2,358,000).
[b] UNIVERSE: Enrollment of civilians age 15-21 on 1/1/79 (N=2,280,000).

TABLE 4.6 Weighted Distributions of Attitudes Toward Employment and Training Programs

Item	Score Category	1979 percent	1980 percent
Thinking back over your entire experience in this program, how satisfied or dissatisfied are you with it overall?	1. Very satisfied	41[a]	43[b]
	2. Somewhat satisfied	45	45
	3. Somewhat dissatisfied	9	7
	4. Very dissatisfied	5	5
	Satisfaction mean	1.8	1.7
How did the training you received in this program affect your chances of getting a good job--do you feel your chances of getting a good job were improved or not improved?	Improved	77[a]	76[b]
	Not improved	23	24
After you left the program, did the training or experience you received help you or not help you in performing any job?	Helped	60[c]	60[d]
	Not helped	40	40

[a] UNIVERSE: Enrollments of civilians age 15-21 who had participated in government employment and training program during fiscal year 1979 (N=2,355,000).

[b] UNIVERSE: Enrollments of civilians age 15-21 who had participated in government employment and training programs during fiscal year 1980 (N=2,253,000)

[c] UNIVERSE: Enrollments of civilians age 15-21 who had participated in government employment and training programs during fiscal year 1979 and who had been employed after leaving the program (N=1,022,000).

[d] UNIVERSE: Enrollments of civilians age 15-21 who had participated in government employment and training programs during fiscal year 1980 and who had been employed after leaving the program (N=866,000).

placement in an unsubsidized job. It is likely that a higher proportion of the respondents found employment at the end of their participation, but did not consider these jobs to be placements by the programs. The prevalence of basic education, education leading toward a GED, and college preparation show the function of government programs in supplementing the educational system for youth. All of the general educational services were more likely to be reported as part of the programs in FY 1980 than in FY 1979, while placements, subsidized and unsubsidized, declined slightly.

Ethnicity

The distribution of services provided by race shows that minority youth generally report receiving each service more often than whites (Table 4.2). Whites, however, are as likely as the others to report subsidized employment and placement in an unsubsidzed job at the end of the program. As expected, Hispanics, who are much more likely to be foreign born than blacks or whites, are also more likely to report receiving basic education and English language training.

In addition to education and placement, a variety of support services are sometimes provided to participants. The most common of these is transportation, reported by one out of five respondents in FY 1980. Lack of transportation can be a problem for youth, as shown in the fact that, in 1979, 30 percent of youth reported that lack of transportation had caused them a problem in getting a good job (Shapiro, 1981). Black youth were particularly likely to report problems with transportation so it is consistent that they are particularly likely to report using transportation services. A fairly large proportion of youth also report receiving medical care through their government sponsored employment programs.

Child care was relatively infrequently reported, perhaps reflecting the relative youth of the sample. Very few NLS youth report living with their own children. In general, more minority participants than whites and more blacks than Hispanics report receiving each support service. The largest proportionate difference is in child care, where minority youth are more than twice as likely to report the service as are whites.

Sex

Table 4.3 shows that, except for these support services, there were few differences by sex in services reported in either year. Young women were more likely than young men to report receiving classroom training for job skills, while young men were more likely to report subsidized employment. While young women were slightly more likely than young men to report receiving job counseling in FY 1979, by FY 1980 job counseling was reported by just over half of each sex. In FY 1980, slightly more of the young men in the programs reported training to get a GED certificate than young women, but the difference is not large. Men are more likely to report most support services, with the exception of child care. The largest difference is in the report of medical care, given to 23 percent of the men and 13 percent of the women in FY 1980.

Income Status

Table 4.4 shows the distributions of services reported by youths above and below the CETA criteria for economic disadvantage. While the relatively small number of non-disadvantaged youth make the results unstable, the direction of shifts in services is consistent. Compared with FY 1979, in FY 1980 participants who were economically disadvantaged were more likely to receive basic education (including training in the English language) and training for the GED. Non-disadvantaged participants, on the other hand, tended to be less likely to report these same services, and were also less likely to report skills training and non-CETA job placement in FY 1980 than in FY 1979.

Enrollment Status

The distributions of services by the enrollment status of the participants (Table 4.5) show more variation than was true for sex, race, and income. Some of this variation no doubt comes from the relatively small cell sizes resulting from splitting the participants into four unequal categories. However, much of the variation is consistent with the goals of government sponsored employment programs in supplementing the regular school system.

Out of school youth, especially high school dropouts, are more likely than students to report most of the services, with the differences particularly pronounced in the areas of basic education, training for a GED, and skills training. College enrollees are the group least likely to report job counseling. In addition to the training provided, larger proportions of dropouts than students or graduates report receiving support services, especially child care and transportation. Both dropouts and high school graduates report fairly high levels of use of medical services. In keeping with the presumed greater immediacy of employment for non-students, high school graduates were more likely than students to report receiving placement into an unsubsidized job in both years.

In contrast to the general stability from one year to the next seen in the previous tables, there are fairly large changes in the reports of services for dropouts over time. Even if some of the instability simply reflects the small number of cases, the direction of the changes is notable. The proportion of programs for dropouts which provided basic education increased by 12 percent, but the proportions providing college preparatory education, skills training, subsidized employment, and, most seriously, unsubsidized placement, all dropped substantially.

The concentration of educational services on out-of-school youth suggests that government sponsored employment programs supplement regular educational systems for youth who either dropped out of school early or who failed to acquire adequate job skills before graduation. It is less clear why so many out of school participants report receiving medical services. The prevalence of child care among dropouts probably reflects the impact of early pregnancy on the decision to leave school, especially among young women.

V. PERCEIVED EFFECTIVENESS

Participants were asked how they felt about the effectiveness of their programs in terms of their overall satisfaction with the program, whether or not they felt that their chances of getting a good job were improved by their participation in the program, and, for youth who had been employed after leaving programs, whether or not they felt that what they had learned in their program was useful to them on the job. Table 4.6 shows that on all three counts participants felt that the programs were worthwhile. The distributions are substantially stable from FY 1979 to FY 1980, although all three indicators are more positive in FY 1980 than they were in the previous year.

In both years, almost nine out of ten respondents reported being either somewhat satisfied or very satisfied with their programs, overall. Over three fourths of the programs were felt to have improved participants' chances of getting a good job. Among youths who had found work after leaving a government sponsored employment program, three out of five felt that the program had helped their performance on the job.

Table 4.7 shows the perceived effectiveness of programs broken down by income status, enrollment, ethnicity, and sex. Responses to the question about the usefulness of training on a subsequent job are more variable than

TABLE 4.7 Perceived Effectiveness of Government Employment Programs, by Selected Characteristics

Characteristics	1979					1980				
	Percent Satisfied[a]	Percent believe chances improved[a]	Percent of Universe	Percent believe helped performance	Percent of Universe[b]	Percent Satisfied[c]	Percent believe chances improved[c]	Percent of Universe	Percent believe helped performance[d]	Percent of Universe[d]
Economically disadvantaged										
advantaged	89	79	26	70	25	92	77	23	56	25
disadvantaged	86	76	74	57	75	87	76	77	61	75
Poverty status as defined by CPS										
Above poverty	88	77	69	62	71	89	77	63	59	68
Below poverty	83	74	31	57	30	88	75	37	62	32
Enrollment Status										
High school dropout	83	77	15	64	15	78	74	16	52	13
High school student	89	80	51	60	46	93	80	51	66	44
College student	84	63	13	46	16	91	66	11	56	16
High school graduate	85	77	21	67	23	85	75	22	55	28
Ethnicity										
Black	86	80	34	68	30	88	81	36	67	32
Hispanic	88	78	11	72	10	88	82	11	73	12
White	86	75	55	54	61	89	61	53	53	57
Sex										
Female	89	80	54	71	52	91	80	52	63	48
Male	84	72	47	59	48	86	72	49	56	52

[a] UNIVERSE: Enrollment of civilians 15-21 who had participated in government employment and training programs during 1979 (N=2,355,000).

[b] UNIVERSE: Enrollment of civilians 15-21 who had participated in government employment and training programs during 1980 (N=2,253,000).

[c] UNIVERSE: 1979 Participants who had been employed after leaving the program (N=1,021,700).

[d] UNIVERSE: 1980 Participants who had been employed after leaving the program (N=866,000).

the responses to the other questions, no doubt because of the smaller sample size involved. For both measures of income status, poverty and economic disadvantage, more affluent youth are more likely than poor youth to report being satisfied and that their chances of getting a good job were improved. In FY 1979, affluent youth were also more likely than their poorer counterparts to feel that their programs were helpful to them on a subsequent job. In FY 1980, however, this relationship had reversed.

Differences by enrollment status are intriguing. Students, particularly those in high school, tend to report being satisfied with their programs, with dropouts least likely to be favorably disposed to their programs, over all. College students, presumably the group with the best employment chances to begin with, are least likely to report improved chances for a good job, while high school students in both years are the most optimistic about the program effects. Responses to both of these questions are largely unchanged between years. However, on the question of whether the program helped performance on a subsequent job, the proportion of out-of-school youth responding affirmatively dropped twelve percentage points between years. In contrast, high school and college students were more likely to respond positively to the question in FY 1980 than they were in FY 1979. The significance of the difference over time is unclear, but the drop in perceived effectiveness among out-of-school youth may lie in the shift toward basic education for these participants. It seems reasonable that programs providing general educational services may not be seen as affecting performance on a specific job, yet at the same time be felt to be useful in gaining entry to employment.

Young women are more likely than young men to see their programs as effective in terms of both improved prospects and performance on the job, especially in FY 1980. When responses are broken down by ethnicity, there is little variation in overall satisfaction, but some interesting differences appear for job outcomes. Minority youth, especially Hispanics, are more likely than whites to report that the programs improved their chances for a good job and were useful in job performance.

VI. SUMMARY

Government employment and training programs were fairly stable over the period from FY 1979 to FY 1980, reaching slightly more than one of 20 youth in the population each year. Cumulative participation, of course, is much more extensive, with one of six youth having been enrolled in a program at some point in their lives. The targeting of the programs toward youth with employment problems is indicated in the relatively high participation rates of dropouts, ethnic minorities, and youth from economically disadvantaged homes.

The most commonly provided services were subsidized employment, job counseling, and skills training. Such services are aimed at immediate improvements in the employment outlook for participants, and the proportion of programs delivering these services remained quite stable over time. However, there is also evidence that the programs had an increasing role in providing more general educational services to disadvantaged youth. Minority, poor, and out-of-school youth all were more likely to report receiving various types of general educational services in FY 1980 than in FY 1979.

Participants generally reported being quite satisfied with their programs and felt that they were useful in terms of job outcomes. Even using the most stringent criterion, the actual usefulness of the skills or knowlege acquired in the programs on a subsequent job, three fifths of the programs were rated as effective.

One way to look at the perceived effectiveness of programs is to consider what types of youth are the most likely to have problems in the labor market. High school dropouts, ethnic minorities, and youth from poor families traditionally have higher unemployment rates and fewer opportunities for education than other youth. Thus, it is not surprising that whites and college students, having presumably more resources of their own, are least likely to report improvements in job opportunities or job performance due to program participation. The apparent drop in the perceived usefulness of training on the job reported by dropouts and high school graduates could result from the increase in general education services, which may to some extent replace a specific skills emphasis in their program services.

APPENDIX 4A

There are some differences between NLS reports and descriptions of government employment and training programs based on tables in reports from the Department of Labor. Table 4A.1 shows comparisons on race, sex, and economic status, using figures for FY 1979 derived from the Employment and Training Report of the President and the NLS reports. The most serious discrepancies are in the estimates of race and economic disadvantage. Many of the differences between the two sources can be attributed to the following considerations.

I. DATA SOURCES

NLS figures are based on personal interviews with youth, while the tables in the Employment and Training Report come from administrative records, either directly from Prime Sponsor reports to the Department of Labor or from the Continuous Longitudinal Manpower Survey (CLMS). The CLMS itself relies on administrative files for much of its information about participants.

Many of the discrepancies are probably attributable to the differences in methodology. Information from surveys must reflect the perceptions of program participants, and these perceptions may not include the same information which is used in creating administrative files. This restriction is particularly important in determining what types of information about programs can be expected to be reported reliably. CETA was designed to use local organizations to deliver services, so that the names of programs, from the participants' point of view, may reflect the local terminology--First Avenue Day Care, etc.--rather than titles important to program administrators. Thus, the distinctions by administrative category which can be determined from agency

TABLE 4.A1 Race and Sex Distributions of Participants in Employment and Training Programs FY 1979

	NLS[a]	Adult[b] CETA (Titles II, VI, VII)	Youth[c] CETA (Title IV)	Total CETA[d]
Race				
Black	35	36	49	44
Hispanic	11	10	11	11
White and other	54	54	40	45
Sex				
Female	51	51	50	50
Male	49	49	50	50
Economically disadvantaged[e]	74	98	98	98
Estimated N	1,788,000	468,384	966,586	1,434,970

[a] SOURCE: Borus, ed., Pathways to the Future: A Longitudinal Survey of Young Americans. Preliminary Report on the 1981 Survey. Table 4.1. Weighted data.

[b] SOURCE: Calculations derived from Tables F-10.1, F-10.10, and F-10.11 of the 1980 Employment and Training Report of the President. Excluded from adult programs are Title III and Win which are included in NLS figures.

[c] SOURCE: Calculations derived from Table F-10.6 of the 1980 Employment and Training Report of the President. Excluded from youth programs are YIEPP, Job Corps, and YACC programs which are included in NLS figures.

[d] SOURCE: Calculations derived from columns 2 and 3.

[e] For NLS, the CPS poverty level was the criterion. CETA figures are based on economic disadvantage as defined in CETA regulations.

records cannot be expected to be obtained from personal interviews with participants. Similarly, distinctions between CETA programs and other government sponsored programs such as WIN are not expected to be reliably reported by participants. The programs as reported by youth in the NLS include a range of different service providers, including but not limited to the services funded by CETA. Within the actual CETA-funded programs, no distinction is expected to be made reliably between programs funded specifically for youth and programs open to individuals of all ages.

In contrast, the tables presented in the Employment and Training Report, obtained from administrative files from CETA Prime Sponsors, are restricted to CETA programs and are separated according to administrative category. They do not reflect all of the available services in which CETA is involved, since YACC, Job Corps, and programs funded under Title III are not included. The difference in coverage may account for some of the difference in the two sets of figures, at least to the extent that the CETA programs reported are targeted more toward the economically disadvantaged and minority populations than are the excluded programs.

II. SCOPE OF TABLES

There are several differences in the way that the tables in the two reports are structured which could lead to different descriptions of participant characteristics.

Participant definitions

The NLS tables, which present figures on program participant characteristics, count each person only once--either as a participant or a nonparticipant. The tables are given by fiscal year, and count people whose program extends from one year into the next as participants in both years.

Some individuals report participating in more than one program, but the tables on participant characteristics count these respondents only once.

There are two sets of tables in the Employment and Training Report, reflecting two data bases. Both differ in important ways from the NLS tables. One set of tables (F1-F9 in the 1980 Employment and Training Report) comes from reports of CETA agencies to the Department of Labor. Like the NLS, these tables include carryovers, people who were enrolled in programs prior to the beginning of the fiscal year. They also, however, count intertitle transfers, people who are shifted from one funding category to another within the CETA system. To the extent that youth who come from minority backgrounds or who come from the most impoverished backgrounds are most likely to require extensive services to become job-ready, and thus are more likely to become intertitle transfers, the Employment and Training Report tables may overestimate the proportion of such youth in CETA relative to the figures presented in the NLS.

The other set of tables (10.1-10.11) in the Employment and Training Report are based on the CLMS and are restricted to new participants only. As noted, the NLS report tables include carryover participants. Without further analysis it is not possible to determine the effects of the exclusion of carryovers on the descriptions of participant characteristics, but it seems likely that there will be some discrepancy. Also, there is a possibility of double counting in both sets of the Employment and Training Report tables if some participants terminate from one program and later return for further services. These people would be new enrollments, rather than inter-title transfers. The NLS tables on participant characteristics do not double count repeat enrollees. As was reported in the first volume, minority youth are more likely than whites to report multiple enrollments, so the Employment and

Training Report tables would tend to report higher minority participation due to the difference in the scope of the tables.

Age range

The NLS tables do not reflect the same age range as the Employment and Training Report tables. NLS respondents were 14 to 22 years old at the time of the initial interview, and 15 to 23 years old at the time of the second interview. To assure comparability of samples across years, the tables presented are restricted to youth aged 15 to 21 on January 1 of the appropriate year. The Employment and Training Report tables do not have the same age restrictions, since they may include youth under the age of 15, and since the age determinations are done at the date of enrollment in the program rather than at a uniform time point.

Programs included

As mentioned above, the administrative distinctions which can be presented in the Employment and Training Report are not reliably made in the NLS. Even within the CETA program, the Employment and Training Report tables are broken down between programs specifically targeted to youth and the more general programs. These more general programs involve almost one third of the total youth participants. Department of Labor programs not included in the Employment and Training Report tables include Job Corps, Youth Incentives Entitlement Pilot Program (YIEPP), Title III (funding for various special projects) and the Young Adult Conservation Corps (YACC). The WIN program is also not covered. Additionally, many of the services delivered as part of CETA are conducted by community organizations which can provide the same services to persons not eligible for CETA if they have funding from other sources. Some of the NLS programs are no doubt of the latter sort.

III. DEFINITIONS.

There are several differences between the Employment and Training Report and the NLS in the definitions used in presenting data. These differences should account in part for the differences in distributions.

Race

The simplest difference in category definition between data sources is in the definition of race: members of "other" races as presented in the tables from the Employment and Training Report are included in the "white" category in the NLS. When other races are combined with whites in the Employment and Training Report data, the apparent differences in racial distribution are reduced, since the proportion of whites increases.

Economic disadvantage

The most glaring difference in the characteristics of participants between the NLS and the Employment and Training Report is in the proportion of people who are economically disadvantaged. In this case, both the difference in the means of collecting data and the differences in the definitions used should go a long way toward explaining the discrepancy.

The NLS bases its assessment of poverty on reports from respondents (or, when appropriate, from their parents). Income from all sources for the entire year is aggregated, and the resulting annual income figure is used in the determination of poverty status. On the other hand, the regulations defining eligibility for CETA services specify that annual income can be estimated from income for the previous six months. The economic criteria for poverty are fairly stringent, so persons who are economically disadvantaged at the time of entry into the program could easily be above the criterion level for the entire year. For example, a participant who finds a job following completion of a CETA program can earn enough income to be counted as non-disadvantaged by the NLS by the end of the calendar year. Similarly, a worker who becomes unemployed in the middle of the year might qualify as economically disadvantaged for CETA after six months of no earnings, but be counted as non-disadvantaged by the NLS on the basis of earnings prior to the job loss. It is likely that many entrants to CETA apply for services at a time when their family income stream is uncharacteristically low, so that the apparent difference between the two data sets is exacerbated.

The difference in methods of collecting information on family income between the NLS and the Employment and Training Report should also be taken into account. NLS youth take the interview quite seriously, but certainly their estimates of annual income are more casual and less dependent on documentation than are the estimates used in determining program eligibility. Particularly in the case of family members other than the respondent (siblings, for example), estimates of income are likely to be less precise in the NLS data than in the CETA files. Since information given to the NLS interviewer has no practical consequences for respondents, it is reasonable to assume that the errors in such estimates are unbiased. Applicants for CETA services, on the other hand, are aware that high estimates of family income could disqualify them from programs, so estimates distorted in an upward direction are less likely. This difference in motivation should lead to somewhat higher estimates of family income for NLS respondents than for CETA applicants. NLS income estimates are designed to be effective for purposes of economic analysis, and cannot be expected to match precisely data gathered for formal determination of eligibility.

IV. SUMMARY

Several factors have been reviewed which affect the comparability of NLS tables on participants in government-sponsored training programs and tables based on administrative reports from CETA agencies. There are differences in the populations included in the tables and in the definitions of categories which have similar labels in the two reports, both factors which systematically affect the estimates of participant characteristics. Additionally, the methods used to collect the two data bases reflect different sets of capabilities and constraints.

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CHAPTER 5

THE TIME-USE BEHAVIOR OF ADOLESCENTS

by Ronald D'Amico*

I. INTRODUCTION

The modern industrial age has become increasingly time-conscious, with the beginnings and endings of daily activities regulated by the clock to an extraordinary degree. In recent years, social scientists have come to appreciate that such synchronization of our daily lives affords unique research opportunities. Time, it is recognized, is a basic resource available to all members of society and how that resource is used by different segments of the population is of obvious research interest. At the macro level, for example, time expenditures bear important implications for the quality of life. Indeed, how much time is spent on household chores, or in transportation, or in leisure activities, and how time is apportioned while at work might all well serve as useful social indicators.

At the micro level, time allocations are also of considerable interest. Economists direct analytic attention to investigating how time "inputs" are converted to "outputs" of various sorts. Thus, for example, family members are hypothesized to apportion their time between market and nonmarket activities in order to maximize the family's consumption of market and home goods (see, for example, Becker, 1965; and Gronau, 1973). To cite another example, parent-child interactions are viewed as investments in the child's human capital development (see, for example, Fleisher, 1977). Quantifying time expenditures, then, becomes necessary for estimating rates of return.

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Time-use research is especially intriguing because time is unique in being a resource which is perfectly equally distributed to all members of society, at least in the short run (individuals do, of course, have varying longevities). How time is used then indicates the preferences and constraints confronting different strata of the population.

Unfortunately, the time-use research now available is quite fragmentary, largely reflecting the inadequate data on the time expenditures of individuals. Increasingly, however, this inadequacy is being overcome by systematic data collection efforts, where careful measurement strategies are used to record time allocations for large, representative samples of individuals. The research described in this chapter represents the fruits of one such endeavor, the time-use data collected in the 1981 NLS youth survey. Our goals in this paper are two-fold: 1) to take a first look at these data and briefly describe the time allocations of American youth across a set of activities, and 2) to investigate some of the determinants and/or covariates of time-use expenditures.

II. MEASURING TIME-USE IN THE NLS

Because the paucity of time-use research derives partly from inherent measurement difficulties, a brief discussion of how some of these difficulties were dealt with in the NLS is appropriate here.

The earliest efforts at eliciting time-use information in social research consisted of questions asking respondents to estimate their "usual time" expenditures across a range of activities. While some interesting findings emerged from this research, subsequent investigations have shown the approach to be notoriously unreliable in that respondents consistently overestimate their actual time expenditures. An alternative methodology, found to minimize this difficulty, is the so-called "time-diary" approach, which asks respondents to report what they were doing minute by minute for a single twenty-four hour period.

Using the time diary is clearly superior to asking about "usual" activities and seems unparalleled if one is interested in undertaking a comprehensive time-use study. Nevertheless, it has certain limitations for the somewhat narrower purposes of the NLS. To begin with, in the time diary, relatively large amounts of precious interview time are used in eliciting time-use information on activities of only peripheral interest to the NLS. By contrast, the labor market and education activities, of paramount concern to NLS researchers, are often recorded on time diaries as homogeneous "time at work" and "time at school" categories, respectively, with no consistent differentiation according to type of job activity (e.g., training time, type of job task, etc.) or school activity (e.g., class time, study time, extracurricular activities, etc.). Moreover, while the time diary is well suited for reporting on time allocations by activity in the aggregate, the instability inherent in asking for respondents' time allocations for single diary days makes its use more problematic where, as in the NLS, micro data analyses are typical.

Accordingly, for the NLS, an alternate method for garnering time-use data was adopted. This approach asks respondents to report their time expenditures on select activities "during the last seven days." Its advantage from our point of view derives from the ability to tailor questions to focus in-depth attention on those activities of greatest interest to the NLS. Moreover, by asking about a specific and recent time period it was believed that the recall problems plaguing the "usual time" approach would be minimized; at the same time, by broadening the focus beyond interest in just a single day, the instability of time-use estimates should be attenuated relative to a time diary approach. Finally, asking about a week's activities seems to correspond more closely with the way people actually schedule and organize their time. (For a fuller discussion of the trade-offs involved in choosing a time-use methodology, see D'Amico, 1980.) A methodological study conducted on pre-test data, which explicitly compared time diary and seven-day time estimates, lent further credence to the utility and reliability of adopting a seven day approach for select activities (D'Amico, 1980).

Accordingly, the NLS asked respondents in-depth questions about their time expenditures during the last seven days for the following activities: 1) time at work, including time on various job tasks and time travelling to work; 2) total time at school, including time attending classes and time studying at school; 3) time at government or other training programs, including class time and study time; 4) time spent on each of various job search activities (asked of those looking for work); 5) time spent sleeping; and 6) time spent watching TV. Additional related information was also elicited, including the degree of the respondent's responsibility for each of various household chores, including child care. Because pre-test results showed that the reliability of time estimates for household chores, child care and selected other activities dropped off sharply when respondents were asked to recall beyond a single day, time-use estimates for household chores and child care, as well as for time spent reading, were elicited for the day preceding the interview day only.

III. THE CONCOMITANTS OF TIME-USE

Following Robinson (1977), time allocations can be conceptualized as being determined by four sets of factors: 1) personal characteristics, including race, sex and social background; 2) role obligations, including whether the respondent is employed, a student, a parent, a spouse, and so on; 3) ecological characteristics, including not only the respondent's living arrangements but also such things as season and day of the week; and 4) resources, such as income and the utilization of labor-saving technology. The way each of these relate to time-use expenditures will be considered in the following sections.

Personal Characteristics

The first set of comparisons regarding the relationship of personal characteristics to time-use behaviors is presented in Table 5.1, which reports time-use breakdowns by race and sex. Turning first to the employment characteristics, we note sex differences in the proportion of respondents who are employed. Across the racial groups, males are anywhere from 6 to 14 percentage points more likely to work than are females. Notable racial differences in employment status also emerge, with blacks least likely and whites most likely to be employed. Hispanics occupy an intermediate position between these two groups.

Among those who work, however, the length of the average work week shows only modest variance across race and sex groups. Hispanic males have the longest work week, at 35 hours, while white females have the shortest week, at 28 hours. Across all racial groups, women not only have lower labor force participation rates but also work from 2 to 4 fewer hours per week than do males. Presumably these sexual differences in work intensity reflect in part the proclivity of married women, even at this age range, to work only part-time while keeping house. Similarly, among men, the fact that the average work week is as low as it is doubtless reflects the inclusion in the sample of students, who also tend to work only part time.

Table 5.1 Time-Use for Selected Activities: Results by Race and Sex

Activity	Black		Hispanic		White	
	M	F	M	F	M	F
Working for pay						
% with a job	56.2	41.6	63.8	49.6	68.1	61.7
Hours spent working for pay	32.48	30.31	35.09	30.84	32.95	28.44
% time writing/reading[a]	21.5	36.7	17.9	42.4	18.5	38.9
% time working w/ hands[a]	75.1	71.4	80.0	72.0	78.1	72.3
% time with people[a]	53.0	60.0	47.6	65.0	50.7	67.8
Hours spent for trip to work (one-way)	.29	.33	.27	.28	.27	.23
Time at school						
% enrolled in school	40.0	44.6	40.6	37.2	45.7	42.1
Hours spent at school	29.68	25.29	24.50	24.55	27.92	26.16
Hours spent in class	21.77	19.37	18.35	18.57	19.01	18.92
Hours spent studying at school	4.64	3.81	3.55	3.10	5.05	4.37
Other time at school	3.27	2.11	2.60	2.88	3.86	2.87
Hours spent studying not at school	7.88	8.07	6.70	7.66	7.49	9.04
Total hours spent studying[b]	12.52	11.88	10.25	10.76	12.54	13.41
Hours spent for trip to school (one-way)	.39	.37	.31	.36	.29	.30
Training programs[d]						
% participating in programs	3.3	4.5	4.2	3.0	4.1	3.3
Hours spent at training programs	16.12	18.64	15.61	21.94	16.37	15.19
Hours spent in class	12.59	15.00	12.56	18.70	13.34	13.23
Hours spent studying at program	1.05	1.83	1.12	.66	1.64	1.38
Other time at program	2.48	1.81	1.93	2.58	1.39	.58
Hours spent studying away	4.45	5.86	4.82	6.72	3.06	5.86
Total hours spent studying[b]	5.50	7.69	5.95	7.38	4.70	7.24
Hours spent for trip to program (one-way)	.29	.39	.36	.42	.36	.33
Leisure						
Hours spent reading (not for school)[c]	6.52	5.30	5.78	5.29	4.93	5.23
Hours spent watching TV	13.35	18.60	12.53	16.04	11.92	14.28
Hours spent sleeping	51.19	53.34	53.90	55.34	52.22	52.90
Hours spent on household chores[c]	9.06	17.98	8.55	18.67	8.17	15.03
N	1555	1525	950	959	3620	3586
Total by race	3080		1909		7206	

Table 5.1 continued

UNIVERSE: Youth age 16-24 on interview date. (N=33,517,000)

Note: All time estimates are hours per last seven days; digits to the right of the decimal point are fractional hours.

[a] These items represent percent of time at work spent doing each of these three tasks and were adapted from Kohn (1969). To allow for a respondent to be doing multiple job tasks simultaneously, the question wording for these items specifically permitted double counting. Accordingly, percents sum to greater than 100.

[b] These figures are the sum of time studying at school (program) and time studying at home.

[c] Since time estimates for these activities were asked of "yesterday" only, time estimates were first weighted to produce a uniform frequency distribution across days of the week, and then multiplied by seven to arrive at an hours per last seven days estimate.

[d] Includes government training programs (e.g., CETA) and "special" schools (e.g., technical schools, barber schools).

Looking at the kinds of tasks youth perform on their jobs, we see marked sex differences but fairly modest race differences. Females of all race groups spend about twice as much time as males reading and writing; indeed, no more than about one-fifth of the average male work week involves such tasks. Women similarly spend considerably more time than males dealing with people while on their jobs. Interestingly, males and females spend about equal amounts of time working with their hands, with such tasks comprising the largest part of the work week for all race and sex groups.

These figures correspond well to what might be expected given the well-known sex differences in distributions across occupational categories. The clerical and sales positions, at which women typically labor, are reflected in the high time expenditures in reading and writing and working with hands, in the former case, and dealing with people, in the latter. Similarly, the disproportionate representation of young males in manufacturing and craft positions explains their intensive involvement with manual tasks. In any case, these data provide an informative and useful way of quantifying the sexual division of labor in the American work force. Along these lines, attention should once again be drawn to the surprisingly close correspondence of job task time expenditures across racial groups. Perhaps, as others have found with respect to wages, the races begin to diverge markedly in their job tasks only further along in their careers.

Turning to the results for time at school, among Hispanics and whites, males are more likely to be enrolled than are females but the opposite is true among blacks. Indeed, 45 percent of all black females are enrolled, second only to the 46 percent figure for white males. With the exception of black males, all groups spend roughly the same amount of time per week attending classes, just short of four hours per school day. However, there are notable discrepancies in total amount of time various groups spend actually at school per week, suggesting that some groups spend more time in extracurricular or other leisure activities at school. In particular, black and white males spend more time at school than do females, and Hispanics of both sexes spend the least amount of time there. Some of these differentials represent the greater amounts of study time which males, whites and blacks spend at school, but equally as notable is the proclivity of black and white males to spend unstructured "other time" at school, that is, time at school spent neither studying nor attending classes. Apparently, black and white males strongly gravitate towards their neighborhood schools as a focus for recreation and leisure time activities. Interestingly, this pattern does not hold for Hispanic males, who spend among the least time of all groups in "other time" at school. Indeed, with their low time expenditures in classes, studying at school, and, at least for males, spending other time at school, Hispanics in general seem most alienated from schools as institutions.

Finally, with respect to the school section, some modest differences in total study time emerge across race and sex groups. Whites, and especially white females, study somewhat more on average than do others. Not surprisingly, given their low time investments in educational institutions, Hispanics spend the least total time studying of all groups.

Turning to the results for participation in government sponsored or other vocational training programs (excluding those sponsored by employers or unions), note that Hispanic and white males are about one percentage point more likely to participate in such programs than their female counterparts. Surprisingly, this sex differential in participation rates is reversed for blacks. In any case, no more than about 4 percent of any race-sex group participates in such programs. While these data show no notable overall race differences in levels of participation, previous work with NLS data has shown marked race differences in participation rates by type of program.

Because of the low participation rates, cell sizes are so small that estimates of participation are somewhat unreliable. Nonetheless, the patterns that do emerge suggest that trainees invest substantial time in these programs, both attending classes and studying, with total time involvements exceeding 20 hours per week.

Elsewhere in Table 5.1, American youth are shown to spend substantial parts of their week watching TV, with females watching about 2.3 hours a day and males about 1.8 hours. Blacks, and especially black females, seem to watch a bit more TV per week than either whites or Hispanics.

In contrast to this rather substantial leisure time expenditure, youth spend strikingly little time reading during their week. Including the reading of newspapers, magazines, and all other materials not directly related to school, respondents report spending less than three-quarters of an hour per day on these activities.

Finally, in Table 5.1, youth are shown to sleep about 7.5 hours per night, and apparently have some modest responsibility for household chores. On this latter score, unsurprisingly, women of all races spend about twice as much time as males in domestic activities. Time expenditures on household chores will be investigated in more detail in a subsequent section.

Table 5.2 extends our investigation of the relationship between personal characteristics and time use expenditures by reporting results by head of household's occupational status score when the respondent was age 14. Because important sex differences in time-use behaviors emerged in Table 5.1, this table, as well as all subsequent ones, is also broken down by sex.

Note first the concave shape to the relationship between labor force

Table 5.2 Time-Use in Hours for Selected Activities: Results by Sex and Duncan Score of Occupation Held by Head of Household When R was 14

Activity	Duncan of head					
	0-30		31-60		61-100	
	M	F	M	F	M	F
Working for pay						
% with a job	67.4	56.2	69.3	64.5	65.6	60.8
Hours spent working for pay	34.32	29.82	34.16	29.19	30.20	27.48
% time writing/reading[a]	16.8	37.2	19.9	40.0	20.8	40.0
% time working w/ hands[a]	81.2	76.1	78.1	72.8	71.9	65.2
% time with people[a]	50.5	65.6	49.9	69.1	53.1	67.6
Hours spent for trip to work (one-way)	.27	.24	.26	.23	.25	.23
Time at school						
% enrolled in school	34.7	33.9	44.5	40.8	60.6	57.5
Hours spent at school	27.90	25.82	27.74	25.54	28.05	26.23
Hours spent in class	20.95	19.85	19.54	19.60	17.36	17.96
Hours spent studying at school	4.22	3.60	4.61	3.84	5.96	4.56
Other time at school	2.73	2.37	3.59	2.10	4.73	3.71
Hours spent studying not at school	6.43	7.84	6.57	8.96	9.54	10.19
Total hours spent studying[b]	10.65	11.44	11.18	12.80	15.50	14.75
Hours spent for trip to school (one-way)	.33	.33	.29	.30	.30	.31
Training programs[d]						
% participating in programs	4.4	3.4	4.4	3.1	2.7	3.3
Hours spent at training programs	17.20	15.96	17.69	13.72	13.33	18.17
Hours spent in class	13.11	14.09	13.36	10.15	12.10	16.12
Hours spent studying at program	1.61	.86	1.48	2.41	1.39	1.44
Other time at program	2.48	1.01	2.85	1.16	0	.61
Hours spent studying away	2.73	5.73	2.73	4.07	4.99	8.60
Total hours spent studying[b]	4.34	6.59	4.21	6.48	7.38	10.04
Hours spent for trip to program (one-way)	.35	.35	.39	.28	.36	.25
Leisure						
Hours spent reading (not in school)[c]	4.45	4.87	5.37	5.42	5.94	6.93
Hours spent watching TV	13.60	16.86	11.65	14.97	9.81	10.83
Hours spent sleeping	52.66	54.00	52.07	52.55	51.19	52.19
Hours spent on household chores[c]	8.67	17.41	7.61	14.44	8.08	13.34
N	2489	2459	1199	1165	1109	1088
Total N by Duncan category	4948		2364		2197	

Table 5.2 continued

UNIVERSE: Youth age 16-24 for which occupation of head of household when respondent was 14 was reported; excludes respondents with head of household in military. (N=27,785,000)

Note: All time estimates are hours per last seven days; digits to the right of the decimal point are fractional hours.

[a] These items represent percent of time at work spent doing each of these three tasks and were adapted from Kohn (1969). To allow for a respondent to be doing multiple job tasks simultaneously, the question wording for these items specifically permitted double counting. Accordingly, percents sum to greater than 100.

[b] These figures are the sum of time studying at school (program) and time studying at home.

[c] Since time estimates for these activities were asked of "yesterday" only, time estimates were first weighted to produce a uniform frequency distribution across days of the week, and then multiplied by seven to arrive at an hours per last seven days estimate.

[d] Includes government training programs (e.g., CETA) and "special" schools (e.g., technical schools, barber schools).

participation and family background status. The heightened participation rate of those from middle-ranking socioeconomic background may well derive from the difficulty those from the least advantaged families have finding a job, on the one hand, and high college enrollment rates of those from the most privileged backgrounds, on the other. Indeed, that many of the employed from high-status families are actually students working part time is suggested by the relatively short average work week of this group.

The work experiences of youth from various background statuses differ in other important ways. In particular, differences in the way these youth apportion their time while at work are striking. Those from high socioeconomic status (SES) families spend substantially less time than youth from less privileged backgrounds working with their hands. Indeed, the work week of those of high status, of both sexes, involves about 10 percentage points less time investment in such activities than those in the lowest SES category. By contrast, youth from low SES backgrounds are less likely to be dealing with people and writing or reading in their jobs. These results suggest that labor market stratification by socioeconomic group (if not by race) begins at quite an early age.

A high proportion of those from high SES backgrounds are enrolled as full-time students as of the survey date, suggesting that such youth have assimilated the achievement orientation of their parents or at least are confronted with more propitious opportunity structures. Interestingly, total time spent at school shows little variation across socioeconomic groups, but this uniformity masks important differences in the way youth actually spend time while at school. High status youth spend less time attending classes, presumably representing the fact that a higher proportion of them are college rather than high school enrollees. Additionally, the curriculum offered by the high schools attended by those of higher SES may be less structured and offer more opportunity for independent study. In any event, while these youth spend less time attending classes than others, they spend more time studying and spending free time at school. Apparently, because these youth are presumably less alienated from societal institutions, they carry on more extensive social interactions within the school environment.

Finally, relating to this section of Table 5.2, high SES youth spend about 5 more hours studying per week than those of low SES families. Conceivably the higher expectations of the parents and teachers of the former group, and their fewer household and employment obligations, account for their greater diligence.

Finally Table 5.2 shows that time expenditures for TV watching substantially decreases and reading time increases as family background status increases. Nevertheless, even in the highest SES category, youth spend nearly twice as much time watching TV as reading. Sleeping time and time on household chores show only modest variation across SES category, though it is worth noting that the sex differential on time expenditures for household chores is narrowest for those from the highest SES backgrounds.

Status Set

Table 5.3 presents the first set of comparisons showing the relationship between respondents' role obligations and time-use expenditures. This table presents the relation between the youth's enrollment status and time allocations, once again shown separately by sex.

Unsurprisingly, the first rows of this table show that a larger percentage of non-students are employed and that employed non-students work twice as long in their work week than employed students. What is surprising,

Table 5.3 Time-Use in Hours for Selected Activities: Results by Sex and Enrollment Status

Activity	High school		College		Nonstudents	
	M	F	M	F	M	F
Working for pay						
% with a job	47.3	44.7	50.4	49.4	78.8	65.4
Hours spent working for pay	17.31	15.40	19.22	16.64	39.54	34.56
% time writing/reading[a]	11.4	25.3	22.6	34.4	20.0	42.9
% time working w/ hands[a]	84.7	77.2	69.7	63.4	77.7	72.7
% time with people[a]	49.2	78.1	60.0	71.0	49.5	63.5
Hours spent for trip to work (one-way)	.19	.17	.20	.20	.31	.27
Time at school						
% enrolled in school	100	100	100	100	5.4	5.4
Hours spent at school	30.80	29.33	27.23	24.56	8.40	7.00
Hours spent in class	23.52	23.26	15.46	15.34	6.42	5.49
Hours spent studying at school	3.51	3.18	7.49	6.19	1.76	1.23
Other time at school	3.77	2.89	4.28	3.03	.22	.28
Hours spent studying not at school	5.14	6.85	11.19	12.15	5.96	5.94
Total hours spent studying[b]	8.65	10.03	12.68	18.34	7.72	7.17
Hours spent for trip to school (one-way)	.33	.35	.25	.27	.44	.33
Training programs[d]						
% participating in programs	5.8	2.7	1.5	1.8	3.9	4.1
Hours spent at training programs	11.41	10.47	e	e	18.72	17.16
Hours spent in class	10.72	9.27	e	e	14.60	14.41
Hours spent studying at program	.86	.68	e	e	1.72	1.59
Other time at program	0	.52	e	e	2.40	1.16
Hours spent studying away	1.08	1.73	e	e	4.49	6.66
Hours spent time studying[b]	1.94	2.41	e	e	6.21	8.25
Hours spent for trip to program (one-way)	.33	.22	e	e	.36	.38
Leisure						
Hours spent reading (not for school)[c]	4.68	5.54	6.83	5.44	5.04	5.24
Hours spent watching TV	12.85	13.54	8.80	8.07	12.86	17.42
Hours spent sleeping	54.38	54.28	50.59	50.52	51.71	53.38
Hours spent on household chores[c]	6.66	10.68	7.64	11.64	9.14	16.16
N	1423	1262	814	838	3888	3970
Total N by enrollment status	2685		1652		7858	

Table 5.3 continued

UNIVERSE: Youth age 16-24 on interview date. (N=33,517,000)

Note: All time estimates are hours per last seven days; digits to the right of the decimal point are fractional hours. Those classified as "High school" and "College" are full-time students only. Part-time students, as well as the nonenrolled are classified as "nonstudents."

[a] These items represent percent of time at work spent doing each of these three tasks and were adapted from Kohn (1969). To allow for a respondent to be doing multiple job tasks simultaneously, the question wording for these items specifically permitted double counting. Accordingly, percents sum to greater than 100.

[b] These figures are the sum of time studying at school (program) and time studying at home.

[c] Since time estimates for these activities were asked of "yesterday" only, time estimates were first weighted to produce a uniform frequency distribution across days of the week, and then multiplied by seven to arrive at an hours per last seven days estimate.

[d] Includes government training programs (e.g., CETA) and "special" schools (e.g., technical schools, barber schools).

[e] Fewer than 25 respondents fall in this category. Time estimates are not reported due to unacceptable instability.

however, is the extent of the work involvement of both high school and college full-time enrollees. About one-half of high school and college students of both sexes held a job during the survey week, and for each of these groups the length of the work week is on average about sixteen hours for females and about eighteen hours for males.

While each of the three groups shown in this table demonstrate substantial work commitment, the nature of the job tasks of each noticeably varies. Moreover, important sex-by-enrollment status interactions emerge. Among males, high school students perform the most manual tasks of the three groups and are least likely to be writing or reading or dealing with people on the job. Just the opposite is true for male college students; they are least likely to be working with their hands and are most likely to be dealing with paper work and with people. Nonstudents occupy an intermediate position between these two extremes.

For women, the situation is somewhat more complicated. As with males, high school women are most likely and college women least likely to be engaged in manual tasks. In a departure from the pattern observed for males, however, nonstudents are most likely to be reading or writing on the job and least likely to be dealing with people. These sex differentials undoubtedly reflect the fact that female nonstudents of college age are frequently employed in clerical positions, while males of like age and enrollment status are more likely to be employed in blue-collar occupations. Also of interest in these rows of Table 5.3 is the observation that the sex differences in job tasks remain fairly constant across enrollment status. Among nonstudents, females are nearly as likely as males to work with their hands but are substantially more likely to be dealing with paper work and with people. As if in anticipation of their post-student roles, the sex differences in job tasks remains much the same for both high school and college enrollees. Apparently, the sex typing of job tasks extends even to the very youngest employees with only casual labor force attachments.

In the sections dealing with time at school in Table 5.3, note that about 5 percent of non-full-time students are enrolled part time. However, the total time investment of this subset in school related activities, including time at school and time studying, is not inconsequential, amounting to over two and one-half hours per week day. Elsewhere, across all enrollment categories, males spend more time at school than females. As observed in a previous table, however, this finding primarily reflects the greater amounts of "other" time males spend at school, rather than any actual sex differences in time attending classes. High school students of both sexes spend more time at school and more time actually attending classes than college goers, but the latter group spends about twice as much time as the former in total time studying.

Turning to the training section, male high school students and non-students of both sexes are the prime beneficiaries of training programs. While participation rates are quite small for all groups, time investments among those who do participate are substantial, especially for nonstudents. Moreover, total time spent studying is also quite marked for this group. Differences in study time across enrollment status doubtless reflect the fact that high schoolers are most likely to be enrolled in CETA or other government sponsored programs, while nonstudents are mostly attendees of business or technical schools.

Finally in Table 5.3, note that high schoolers spend the most time sleeping of all groups, while college students spend the least time watching TV and, for males, the most time doing non-school related reading. Time expenditures on household chores do not vary markedly between high school and college goers, but nonstudents, and especially nonstudent females, spend substantially longer than any other group on such tasks. Doubtless this reflects the fact that a substantial number of this group are housewives.

In order to consider in somewhat greater detail the time expenditures of nonstudents, Table 5.4 reports time-use estimates for this group separately for the employed, the unemployed, and those out of the labor force. The working for pay figures for the employed, shown in this table, are the same as those already shown as column three of Table 5.3; accordingly, these data will not be described anew.

Of interest elsewhere in Table 5.4 is the finding that such a small proportion of the unemployed and out of the labor force are part-time enrollees or are involved in a training program of any sort. Indeed, the employed are actually more likely to be participating in such programs than the unemployed. And while those out of the labor force show the highest involvements in such programs, at least among males, still about 75 percent of them are neither enrolled in school part time nor participating in training programs. Perhaps these respondents are discouraged job seekers.

With their daily time-use largely unaccounted for by any structured activities (at least those measured in this survey) it is unsurprising that the unemployed and those out of the labor force spend more time than the employed sleeping, watching TV, and performing household chores.

Also of interest, especially for the unemployed, is the nature of and time investment in job search activities. Table 5.5 shows time expenditures in and the success of various job search methods for unemployed nonstudents and for those full-time students and employed nonstudents who were looking for work. These results show, as one might have expected, that the unemployed

Table 5.4 Time-Use in Hours for Selected Activities: Results by Sex and Employment Status, Universe of Nonstudents and Part-Time Enrollees

Activity	Employed		Unemployed		Out of labor force	
	M	F	M	F	M	F
Working for pay						
% with a job	100	100	0	0	0	0
Hours spent working for pay	39.54	34.56	-	-	-	-
% time working/reading[a]	20.00	42.92	-	-	-	-
% time working w/ hands[a]	77.66	72.69	-	-	-	-
% time with people[a]	49.51	63.51	-	-	-	-
Hours spent for trip to work (one-way)	.31	.27	-	-	-	-
Time at school						
% enrolled in school	5.5	6.4	3.1	3.3	8.7	3.6
Hours spent at school	8.46	7.00	e	e	e	e
Hours spent in class	6.33	5.34	e	e	e	e
Hours spent studying at school	1.75	1.22	e	e	e	e
Other time at school	.41	.44	e	e	e	e
Hours spent studying not at school	6.00	5.42	e	e	e	e
Total hours spent studying[b]	7.75	6.64	e	e	e	e
Hours spent for trip to school (one-way)	.46	.33	e	e	e	e
Training programs[d]						
% participating in programs	3.0	4.1	3.0	3.9	14.5	4.3
Hours spent at training programs	13.90	14.97	e	e	28.09	22.34
Hours spent in class	10.75	12.67	e	e	21.36	19.21
Hours spent studying at program	1.31	1.50	e	e	2.85	1.62
Other time at program	1.84	.80	e	e	3.88	1.51
Hours spent studying away	3.41	5.12	e	e	6.81	8.58
Total hours spent studying[b]	4.72	6.62	e	e	9.66	10.20
Hours spent for trip to program (one-way)	.39	.37	e	e	.36	.41
Leisure						
Hours spent reading (not for school)[c]	4.91	5.38	6.88	5.96	5.56	4.42
Hours spent watching TV	11.28	12.78	19.80	23.96	16.54	26.98
Hours spent sleeping	50.91	52.28	54.46	55.16	55.36	55.49
Hours spent on household chores[c]	8.11	14.34	[illegible].82	22.10	12.10	28.10
N	2946	2414	617	517	325	1039
Total N by employment status	5360		1134		1364	

Table 5.4 continued

UNIVERSE: Youth age 16-24 who were part-time students or not enrolled in school at interview date. (N=20,046,000)

Note: All time estimates are hours per last seven days; digits to the right of the decimal point are fractional hours.

[a] These items represent percent of time at work spent doing each of these three tasks and were adapted from Kohn (1969). To allow for a respondent to be doing multiple job tasks simultaneously, the question wording for these items specifically permitted double counting. Accordingly, percents sum to greater than 100.

[b] These figures are the sum of time studying at school (program) and time studying at home.

[c] Since time estimates for these activities were asked of "yesterday" only, time estimates were first weighted to produce a uniform frequency distribution across days of the week, and then multiplied by seven to arrive at an hours per last seven days estimate.

[d] Includes government training programs (e.g., CETA) and "special" schools (e.g., technical schools, barber schools).

[e] Fewer than 25 respondents fall in this category. Time estimates are not reported due to unacceptable instability.

Table 5.5 Time-Use in Hours and Percent Using Various Job Search Methods: Results by Sex and Enrollment and Employment Status

	F-T students		Nonstudents & P-T enrollees			
			Employed		Unemployed	
	M	F	M	F	M	F
% looking for work	26.4	23.5	19.3	18.6	100.0	100.0
Hours spent looking for work last week (all methods)	2.27	1.87	3.30	2.69	5.67	3.41
N	632	502	542	399	585	471
% checked with state employment agency	12.1	12.5	31.3	20.8	52.9	41.7
Job contact (%)	19.5	33.8	31.8	43.0	35.3	37.9
Job offer (%)	6.1	11.8	8.1	9.7	8.7	7.7
% checked with private employment agency	8.5	7.6	14.6	21.2	26.0	20.2
Job contact (%)	57.9	46.3	53.1	52.6	44.4	45.7
Job offer (%)	21.1	14.6	16.0	29.5	8.9	12.3
% checked with friends or relatives	75.6	77.1	86.1	78.4	84.3	79.9
Job contact (%)	50.2	46.7	53.7	48.3	43.8	47.8
Job offer (%)	15.0	10.0	20.4	16.0	12.7	12.4
% checked with newspaper ads	31.7	39.9	44.7	52.9	57.1	61.9
Job contact (%)	56.3	54.1	62.9	55.9	54.8	62.0
Job offer (%)	10.7	12.4	20.9	18.2	5.9	12.8
% took Civil Service test or filed for government job	4.8	6.2	11.4	11.5	11.9	8.9
Job contact (%)	39.4	52.9	34.9	29.4	40.4	27.8
Job offer (%)	3.0	23.5	1.6	5.9	1.8	2.8
% checked with CETA or community action group	5.2	8.8	8.9	5.3	15.2	14.3
Job contact (%)	37.1	25.0	28.6	a	19.4	34.5
Job offer (%)	14.3	12.5	10.2	a	9.7	5.2
% checked with school placement office	21.6	24.8	6.0	9.4	7.8	4.5
Job contact (%)	51.0	39.3	39.4	38.1	29.7	a
Job offer (%)	10.9	11.1	6.1	19.0	2.7	a
% checked with teachers or professors for job leads	22.7	24.4	9.4	7.3	11.8	6.8
Job contact (%)	26.6	22.6	38.5	18.8	39.3	44.4
Job offer (%)	5.2	7.5	7.7	6.3	12.5	22.2
% checked with labor union	1.6	.9	7.1	.6	10.1	1.3
Job contact (%)	a	a	33.3	a	37.5	a
Job offer (%)	a	a	17.9	a	4.2	a
% applied directly to employers	68.9	70.0	68.5	67.7	77.9	71.6
Job contact (%)	-	-	-	-	-	-
Job offer (%)	21.4	16.8	22.4	22.8	11.6	10.7

UNIVERSE: Youth age 16-24 who reported they were looking for work at time of interview or within last 4 weeks. (N=8,530,000)

Note: Time estimates are hours per last seven days; digits to the right of the decimal point are fractional hours. For each method, the percentage figures are: % of job seekers who used that method in the last 4 weeks, % of those using the method who had a job contact result, and % using the method who had a job offer result.

[a] Fewer than 25 respondents used this method. Estimates are considered unreliable and are not reported.

spend more time on job search than either of the other two groups. Somewhat surprisingly, however, unemployed males report spending only about 5.5 hours and females about 3.5 hours on all job search activities per week.

These results also give some sense of the wide range of job search methods which are utilized, especially by the unemployed. Substantial numbers contact state employment agencies, check newspaper ads, use informal information networks of friends or relatives and apply directly to employers. As Table 5.5 shows, all these methods are reasonably successful in leading to direct contact with employers, but at the same time in only a small proportion of cases do job offers actually result. Interestingly, the unemployed, whom we have already shown to be most diligent in their job search efforts, appear to be generally the least effective in eliciting job offers.

We have thus far looked at time expenditures of those with various role obligations. Given that time-use is a zero-sum proposition, it is of considerable interest to observe which time-use trade-offs are implemented for youth as multiple role obligations accumulate. Must students who work, for example, sacrifice valuable study time to carry out their employment obligations? Or do they forsake leisure time activities? Table 5.6 addresses these and related issues by comparing the time expenditures of nonworking high school students, nonworking full-time college students, working high school students and working full-time college students.

As shown previously, employed high school and college youth work on average from about 16 to 20 hours per week. The time for this employment seems to be taken away from a range of activities rather than from any one or two. Employed students spend less time at school, less time actually attending classes (perhaps some are work-study students), less time studying, less "other" time at school (except for female students), less time sleeping,

Table 5.6 Time-Use in Hours for Selected Activities: Results by Sex, Employment Status and Enrollment Status, Universe of Full-Time Students Only

	Employed full-time students				Nonworking full-time students			
	High school		College		High school		College	
	M	F	M	F	M	F	M	F
Working for pay								
% with a job	100	100	100	100	0	0	0	0
Hours spent working for pay	17.31	15.40	19.22	16.64	-	-	-	-
% time writing/reading[a]	11.36	25.32	22.56	34.36	-	-	-	-
% time working w/ hands[a]	84.73	77.16	69.75	63.39	-	-	-	-
% time with people[a]	49.25	78.12	60.00	71.05	-	-	-	-
Hours spent for trip to work (one-way)	.19	.17	.20	.20	-	-	-	-
Time at school								
% enrolled in school	100	100	100	100	100	100	100	100
Hours spent at school	28.66	27.63	23.93	23.51	32.73	30.71	30.60	25.57
Hours spent in class	22.89	21.63	14.60	14.62	24.08	24.58	16.34	16.03
Hours spent studying at school	2.83	3.07	5.90	5.77	4.12	3.28	9.09	6.59
Other time at school	2.94	2.93	3.43	3.12	4.53	2.85	5.17	2.95
Hours spent studying not at school	4.81	6.73	10.07	11.70	5.44	6.95	12.33	12.58
Total hours spent studying[b]	7.64	9.80	15.97	17.47	9.56	10.23	21.42	19.17
Hours spent for trip to school (one-way)	.33	.34	.29	.28	.34	.35	.21	.25
Training programs[d]								
% participating in programs	5.5	2.1	.5	1.0	6.1	3.2	2.5	2.5
Hours spent at training programs	10.36	7.73	16.53	16.42	12.26	12.17	23.54	20.17
Hours spent in class	9.74	5.54	11.40	15.53	11.53	11.57	15.94	21.11
Hours spent studying at program	1.19	1.29	1.50	.67	.59	.31	4.32	1.84
Other time at program	-	.90	3.63	.22	.14	.29	3.28	0
Hours spent studying away	1.66	1.18	6.41	5.63	.61	2.06	5.26	8.91
Total hours spent studying[b]	2.85	2.47	7.91	6.30	1.20	2.37	9.58	10.75
Hours spent for trip to program (one-way)	.25	.12	.31	.42	.38	.28	.35	.21
Leisure								
Hours spent reading (not for school)[c]	4.38	4.78	6.07	5.75	4.94	6.23	7.91	5.07
Hours spent watching TV	10.98	11.06	8.38	7.38	14.51	15.56	9.23	8.73
Hours spent sleeping	53.29	53.37	50.19	49.59	55.36	55.02	51.00	51.43
Hours spent on household chores[c]	5.75	8.92	7.07	10.12	7.56	10.44	8.43	13.36
N	623	486	412	422	800	776	402	416
Total N by employment status	1109		834		1576		818	

Table 5.6 continued

UNIVERSE: Youth age 16-24 who were full-time students at interview date. (N=13,471,000)

Note: All time estimates are hours per last seven days; digits to the right of the decimal point are fractional hours.

[a] These items represent percent of time at work spent doing each of these three tasks and were adapted from Kohn (1969). To allow for a respondent to be doing multiple job tasks simultaneously, the question wording for these items specifically permitted double counting. Accordingly, percents sum to greater than 100.

[b] These figures are the sum of time studying at school (program) and time studying at home.

[c] Since time estimates for these activities were asked of "yesterday" only, time estimates were first weighted to produce a uniform frequency distribution across days of the week, and then multiplied by seven to arrive at an hours per last seven days estimate.

[d] Includes government training programs (e.g., CETA) and "special" schools (e.g., technical schools, barber schools).

less time watching TV, less time doing leisure reading (except for college females) and less time doing chores. Indeed, with the exceptions noted, employed students spend less time on every other category of activity for which time estimates are collected in the NLS. Interestingly, the time-use trade-offs made by employed males and females, and high school and college students appear quite similar, though males may sacrifice more study time than females, and high schoolers seem to sacrifice a greater proportion of their TV watching.

Ecological Factors

This section of the paper focuses on the role of ecological factors, and, in particular, living arrangements, on especially the household and child care responsibilities of youth. Table 5.7 reports the mean time expenditures and also the degree of responsibility for various household and child care tasks. These results show the greater time expenditure committed by women to household chores across all categories of living arrangements. This sex differential is 2-5 hours for those living alone, with peers or with parents, but is fully 13.5 hours for those who are married. These data dramatically illustrate the extent of the sexual division in the burdens of household obligations.

Also of interest with respect to these time estimates are the within sex comparisons across ecological arrangements. In general, youth allocate least time to household responsibilities when they are living with their parents, but surprisingly this burden does not appreciably increase for youth living alone. Presumably youth living alone occupy modest accomodations and are able to keep necessary household chores to a minimum. By contrast, living with one's friends, and especially living with one's spouse, tends to lead to a

Table 5.7 Time-Use Behaviors for Household Chores and Child Care: Results by Sex and Living Arrangement

Chores and child care	R's living on own away from parents						R's living w/ parents or guardian	
	Alone or with kids		With spouse		With adult (nonspouse)			
	M	F	M	F	M	F	M	F
Household chores								
Hours spent on all chores	9.42	11.48[b]	12.55	25.96	8.64	13.92	7.29	11.85
Degree of responsibility for[c]:								
meals	3.68	4.40	1.71	4.51	2.53	3.35	1.45	2.04
dishes	3.77	4.62	1.69	4.53	2.61	3.49	1.60	2.79
laundry	3.75	4.68	1.55	4.59	3.02	3.89	1.53	2.48
cleaning	4.05	4.69	1.84	4.53	2.69	3.45	1.76	2.80
shopping	4.10	4.56	2.54	4.23	2.74	3.42	1.43	1.84
errands	4.28	4.47	3.18	3.50	3.02	3.09	2.40	2.53
outdoor chores	3.35	2.97	3.74	2.20	2.70	1.85	2.84	1.84
house repairs	3.80	3.42	4.16	1.96	2.92	1.95	2.57	1.56
paperwork	4.14	4.25	2.82	3.52	2.35	2.69	1.23	1.38
Child care								
% with own children in home	0	38.5	45.0	54.5	2.9	13.9	1.2	9.5
Degree of responsibility for care of own children[c]	a	4.86	2.40	4.43	a	4.61	2.62	4.49
Hours spent dressing & feeding	a	20.13	7.01	22.27	a	19.59	3.32	19.03
Hours spent reading & playing	a	21.25	15.21	22.04	a	22.59	15.56	21.42
Other time in supervision	a	45.49	13.11	46.02	a	45.38	8.72	39.61
% with siblings or other children in home	1.4	.1	2.0	.9	12.9	8.3	41.[illegible]	40.1
Degree of responsibility for care of other children[c]	a	a	a	a	1.84	2.54	1.72	2.16
Total hours spent taking care of children in home	a	a	a	a	11.54	14.78	2.98	5.83
Hours spent dressing/feeding	a	a	a	a	1.89	2.43	.22	.90
Hours spent reading/playing	a	a	a	a	4.13	7.14	1.37	2.51
N	315	478	754	1387	697	726	3632	3099
Total N by living arrangement	793		2141		1423		6731	

UNIVERSE: Youth 16-24 not living in dorms, barracks, or other group quarters. (N=30,456,000)

Note: All time estimates are hours per last seven days; digits to the right of the decimal point are fractional hours. Since time estimates for household chores and child care were asked of "yesterday" only, time estimates were first weighted to produce a uniform frequency distribution across days of the week, and then multiplied by seven to arrive at an hours estimate for the last seven days.

[a] Fewer than 25 respondents in the cell. Time estimates are considered unreliable and and are not reported.

[b] To make the inter-sex comparison for those "living alone" more meaningful, this time estimate refers to those "living alone" with no children in the home.This was done because only a very small number of males "living alone" have children living with them, and the time-use of women"living alone" with and without children differs drastically.

[c] The degree of responsibility for each chore was assessed by asking respondents to place themselves on a five-point scale, with 1 = R almost never does the chore to 5 = R has almost sole responsibility for doing this chore.

proliferation of house management responsibilities. Indeed, wives spend over 100 percent and husbands nearly 50 percent more time on household chores than their peers who live alone. Looked at another way, a male and female married and living together spend between them over 38 hours per week on chores, but only about 20.5 hours per week on average if unmarried and living apart.

The questionnaire items which ask respondents to assess their degree of responsibility for individual chores on a five-point scale reveals some additional facets of interest. For preparing meals, doing dishes, doing the laundry, cleaning house and shopping, women report a greater level of responsibility than males in every type of living arrangement. Similarly, regardless of living arrangement, men claim a greater level of responsibility for outdoor chores and house repairs. For the remaining chores listed, doing paperwork and running errands, relative responsibility level varies depending upon the ecological arrangement. These differentials are most extreme in the case of married couples, where the division of responsibility is clearcut for most chores, and narrowest for those living alone, where both males and females report high responsibility levels for all chores.

Looking at within sex differences, youth of both sexes report the lowest absolute levels of responsibility when living with parents. For females, these levels show a marked jump for those living with others and a still further increment, to the highest levels reported for females, for those living alone or with a spouse. This pattern differs noticeably for males. Starting from the lowest responsibility levels for males living with parents, the level of obligation increases not at all for most household chores for those who are married. A sizable increment is then reported for those living with others, and a still further jump is detected for those living alone, bringing male responsibility levels nearly up to or greater than those reported by females.

Turning to the time-use estimates for child care in Table 5.7, once again a marked, if not unexpected, sexual difference in time expenditures emerges, especially for those with their own child. Among parents, women claim notably higher levels of responsibility for child care and report spending over three times as long as males in dressing/feeding the child and in supervision time. The sexual inequalities are reduced somewhat when playing with the child is considered, but they remain pronounced.

Youth report remarkably little time taking care of their siblings (under age 14) and here the sexual disparities are far more modest. Females living in their parents' dwelling unit, with younger siblings in the household report spending only about 5.8 hours per week on child care and supervisory activities of all sorts. For males, this figure is about 3 hours per week.

Table 5.8 extends this investigation by considering whether a redefinition of household responsibilities occurs as wives accumulate additional role obligations. In particular, the universe in this table is restricted to those nonenrollees who have their own children. Time expenditures are reported for working and nonworking women and for males whose spouses are working and nonworking.

As Table 5.8 shows, males whose wives work spend only about two additional hours per week on household chores than males whose wives are not employed. Moreover, the variables measuring degree of responsibility for various chores show an almost imperceptible shifting of responsibility such that wives who work claim slightly less responsibility for most chores than wives who do not work and males whose wives work claim very slightly more responsibility on some chores than males whose wives are not employed. Perhaps most dramatic in this table, however, is the substantial drop in the

Table 5.8 Time-Use Behaviors for Household Chores and Child Care: Results by Sex and Wife's Employment Status: Universe of Nonstudents and Part-Time Enrollees with Children

	Nonstudents & P-T enrollees with own children				
	Males with children		Females with children		
			Spouse present		
Chores and child care	Wife not working	Wife working	R not working	R working	No spouse present
Household chores					
Hours spent on all chores	11.17	13.12	34.54	25.36	24.72
Degree of responsibility for[b]:					
meals	1.44	1.60	4.64	4.41	3.69
dishes	1.38	1.49	4.74	4.31	3.98
laundry	1.41	1.41	4.76	4.57	4.00
cleaning	1.63	1.81	4.72	4.37	4.14
shopping	2.43	2.37	4.27	4.29	3.64
errands	3.06	3.11	3.48	3.58	3.58
outdoor chores	3.71	3.66	2.28	2.20	2.44
house repairs	4.03	4.15	2.03	1.86	2.48
paperwork	2.82	2.46	3.50	3.68	2.97
Child care					
Degree of responsibility for child care	2.34	2.47	4.67	4.10	4.62
Hours spent dressing & feeding children	6.17	5.57	24.67	19.30	19.58
Hours spent reading & playing with children	16.03	14.28	21.86	22.46	14.76
Other time in supervision	14.55	11.12	52.35	37.16	41.60
% with a job	83.8	87.1	0	100	34.1
Hours spent working for pay	40.2	43.6	-	29.9	34.3
Hours spent reading (not for school)	3.9	3.5	4.2	2.7	3.7
Hours spent watching TV	17.1	14.9	29.7	17.5	23.3
Hours spent sleeping	51.9	52.0	54.7	52.7	53.0
N	200	220	439	323	718

UNIVERSE: Youth age 16-24 with children who were part-time students or not enrolled in school at interview date. (N=4,235,000)

Note: All time estimates are hours per last seven days; digits to the right of the decimal point are fractional hours. Since time estimates for household chores, child care, and reading were asked of "yesterday" only, time estimates were first weighted to produce a uniform frequency distribution across days of the week, and then multiplied by seven to arrive at an hours estimate for the last seven days.

[a] Fewer than 25 respondents in the cell. Time estimates are considered unreliable and and are not reported.

[b] The degree of responsibility for each chore was assessed by asking respondents to place themselves on a five-point scale, with 1 = R almost never does the chore to 5 = R has almost sole responsibility for doing this chore.

amount of time working women spend doing chores relative to nonworking wives. Since we have just shown no such dramatic increase in males' contribution to household maintenance where both spouses work, we can conclude that third parties, including the service economy, assume some of these housekeeping burdens (e.g., an increased number of meals are eaten out) or that a downward redefinition of what are considered essential household chores occurs. In any event, working wives are still shown to spend nearly twice as long as their spouses discharging household obligations.

Something very much like this scenario applies where child care is concerned. Males report slightly more, females slightly less responsibility for child care where the wife is employed. The woman's time expenditure for dressing and feeding and supervising her child drops markedly when she is employed, though her time spent playing with the child remains essentially unchanged. Interestingly, the husband's time expenditure on all facets of child care also tends to decline somewhat when his spouse is employed. Thus, these findings suggest that when a wife is employed, a greater burden of child care does not devolve to the husband. Instead one can assume that third parties (e.g., relatives or day care facilities) take up the slack.

Finally, looking at the various other relevant components of time-use which the NLS provides, note that mothers who work apparently must sacrifice substantial parts of their leisure activities. Such women sleep somewhat less on average, watch considerably fewer hours of TV, and read a bit less per week than mothers who are not employed. Nonetheless, in the context of husbands' time expenditures for these activities the reductions seem less dramatic; indeed, working mothers sleep as much as their husbands do and still watch about 3 more hours of TV per week. In any event, even granted that working wives work only about two-third of the work week of their husbands, the combined burden of employment and household and child care responsibilities seems very onerous.

Resources

Finally we investigate the relationship between resources and time-use expenditures. One of the most straightforward of these relationships is the effect of ownership of the means of transportation on time expenditures for transportation. Table 5.9 shows mean times for trips to work and school (one-way) and distances (also one-way) by mode of transportation used. The results are not unexpected but still striking. Those who use an automobile or motorcycle to get either to work or school make the trip in substantially less time than those who use public transportation. Indeed, a one-way trip to work by automobile takes less than half the time of a trip by public transportation. Only part of this difference can be accounted for by the fact that those who use private transportation live somewhat closer on average to their place of employment than others.

Riding a school bus, on the other hand, is a relatively time efficient mode of transportation for high schoolers. A trip to school by bus takes slightly less time than a trip by public transportation, though the average one-way distance is over a mile and a half longer. The mode of transportation shown to be generally least costly in terms of time expenditure is walking or riding a bicycle, but this advantage seems to be entirely due to the fact that the destination for the users of this mode is on average no more than 1.5 miles.

Table 5.9 Time-Use in Hours for Transportation: Results by Mode of Transportation

	Mode of transportation				
	Auto/ motorcycle	Public trans./taxi	School bus	Walk/ bicycle	Mixed mode
Trip to high school					
Mean time one-way	.28	.46	.42	.32	.52
Mean distance in miles	4.22	4.77	6.37	1.04	6.58
N	981	295	813	420	41
Trip to college					
Mean time one-way	.38	.65	.53	.28	.38
Mean distance in miles	9.65	8.24	9.91	.92	10.31
N	645	166	13	322	24
Trip to work					
Mean time one-way	.27	.60	-	.16	.28
Mean distance in miles	8.58	9.61	-	1.44	11.97
N	4642	511	-	1014	344

UNIVERSE: Youth age 16-24 (excluding respondents living on campus or school grounds) who spent any time at work or at school within last 7 days of interview date. Estimates for trip to high school and college based on reports from full-time students only. (N=23,989,056)

III. CONCLUSION

The tables described in this paper have provided an interesting sketch of the time-use behavior of American youth. Additionally, we have shown a number of interesting concomitants of time expenditures. Time allocations have been shown to bear systematic relationship to race, family background status, role obligations and ecological arrangements, in addition to some of the more predictable time-use variants by sex. A descriptive and tabular presentation of this sort cannot, of course, claim to pinpoint causal relationships. As with any exploratory and descriptive undertaking, the effort is nonetheless deemed well served if it succeeds in drawing attention to provocative relationships that merit more careful analytic scrutiny. In this we hope to have been successful.

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The Center has also been active in manpower planning both in the U.S. and in the developing countries. A project for the Ohio Advisory Council for Vocational Education identified the highly fragmented institutions and agencies which supply vocational and technical training in Ohio. Subsequent projects for the Ohio Occupational Information Coordinating Committee have followed graduates of these programs. These data and information on occupational distributions of employers collected for the Occupational Employment Statistics Program are being integrated into a comprehensive planning model which will be accessible to trainees and employers and linked to a national network.

Another focus of the Center's research is industrial relations and collective bargaining. In a project for the U.S. Department of Labor, staff members are working with unions and management in a variety of industries to evaluate several current experiments for expedited grievance procedures. The procedural adequacies, safeguards for due process, and cost and timing of the new procedure are being weighed against traditional arbitration techniques.

Senior staff also serve as consultants to many boards and commissions at the national and state level. Recently the Center's staff have produced papers and prepared testimony for the Department of Labor, the Vice President's Task Force on Youth Unemployment, the Joint Economic Committee of Congress, the National Commission for Employment and Unemployment Statistics, the National Commission for Employment Policy, the White House Conference on the Family, the Ohio Department of Corrections, the Ohio Board of Regents, the Ohio Governor's Task Force on Health, and the Ohio Governor's Task Force on Welfare.

The Center maintains a working library of approximately 10,000 titles, including a wide range of reference works and current periodicals, as well as an extensive microfilm and microfiche collection. Through their facilities linked to the University computer, the Center's data processing staff provide statistical, technical, and programming support both for in-house researchers and the over 250 users of the National Longitudinal Surveys data tapes. They maintain the NLS tapes, data base, documentation, and associated software.

For information on specific Center activities, write: Director, Center for Human Resource Research, 5701 North High Street, Worthington, Ohio 43085.

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Center for Human Resource Research

The Center for Human Resource Research is a policy-oriented multidisciplinary research organization affiliated with The Ohio State University. Established in 1965, the Center is concerned with a wide range of contemporary problems related to developing and conserving human resources. Its more than thirty senior staff members come from disciplines including economics, education, English, health sciences, industrial relations, management science, psychology, public administration, social work, and sociology. This multidisciplinary team is supported by approximately 70 graduate research associates, full-time research assistants, computer programmers, and other personnel.

The Center has become preeminent in the fields of labor market research and manpower planning. With continuing support from the United States Department of Labor, the Center has been responsible since 1965 for the National Longitudinal Surveys of Labor Market Experience. Staff have assisted in population and human resource planning throughout the world, having conducted major studies in Bolivia, Ecuador, Kenya, Sierra Leone, Venezuela, and Zaire. At the request of the National Science Foundation, a review of the state of the art in human resource planning was conducted. Other studies have assessed the impact of labor and education policy on labor supply and evaluated employment statistics collection methods. Senior personnel are also engaged in several other areas of research—collective bargaining and labor relations, evaluation and monitoring of the operation of government employment and training programs, and the projection of health education and facility needs.

The Center for Human Resource Research has received over two million dollars annually from government agencies and private foundations to support its research in recent years. Providing support have been the U.S. Departments of Labor, State, Defense, Education, Health and Human Services; Ohio's Health and Education Departments and Bureau of Employment Services; the Ohio cities of Columbus and Springfield; the Ohio AFL-CIO; the George Gund Foundation; the Rockefeller Foundation; and the Ford Foundation. The breadth of the Center's research interests is best illustrated by a brief review of a few of its current projects.

The Center's largest project is the National Longitudinal Surveys of Labor Market Experience. This project has involved repeated interviews over a fifteen-year period with four groups of the United States population: older men, middle-aged women, and young men and women. The data are collected for 20,000 individuals by the U.S. Bureau of the Census, and the center is responsible for data analysis. Since 1979, the NLS has followed an additional cohort of 13,000 young men and women between the ages of 14 and 21. This cohort includes for the first time those serving in the armed forces at the time of the initial interview. In addition to being the definitive U.S. national data set on the labor market activities of young adults, this continuing survey includes unique batteries of questions on such socially important issues as delinquency, alcohol and drug use, fertility, and prenatal care. For this cohort, field work is handled by the National Opinion Research Center. To date the Center's staff have prepared dozens of research monographs, special reports, and books on the NLS, and they also prepare and distribute data tapes for public use.

The Quality of Work Life Project, another ongoing study, began in 1975 as an attempt to improve the productivity and the meaningfulness of work for public employees in the cities of Springfield and Columbus. Center staff also served as third party advisers and researchers exploring new techniques for attainment of management-worker cooperation and worker health in a number of central Ohio private sector industries.

(Continued on inside back cover)